



Maj. Gen. Douglas A. Schiess:

Is that good? Go. All right, good? All right. Good afternoon. All right, thank you. Yeah. All right. Hey, ladies and gentlemen, welcome to this Space Order of Battle panel on our current issues, challenges, and opportunities dealing with the space domain. I'm Major General Doug Schiess, and I have the pleasure of being the Commander of the Combined Force Space Component Command out at Vandenberg Space Force Base in California, and also, dual had it as the Vice Commander of Space Operations Command at Peterson Space Force Base in Colorado. I'd be remiss if I just didn't take a moment to talk about today, 11 September. I know that probably everyone in this room knows where they were on that day. I know that I was a captain out at Schriever then Air Force Base, and I know that that day probably changed the rest of my trajectory as a military member. I also think about the times that I was in the Middle East as well during that day. So just take a moment, if you would, with me to remember those lives that we lost and the lives that we lost over the 22 years of that battle. So if you'll just take a few seconds.

All right. And I don't normally get to be in a group this big, so I always want to do a shout out to my battle buddy, my wife of 33 years, who's here with us today, who has been making sure that Airmen and Guardian families have been taken care of for the 31 years that we've been doing this. So thanks for getting here. I know I'll get my score later. All right. And I know, for this group, I'm probably preaching to the choir a little bit, but today, the United States' dependency on space has exponentially grown, since we've become a spacefaring nation. Our potential adversaries have been watching us. They watched us for 20 something years and how we fought in the Middle East, and they have developed operational capabilities that can deny our joint and conventional forces and put our space assets at risk. The Department of the Air Force and the United States Space Force leaders have charged us with coming up with resilient architectures. And even our Space Command leaders have advocated for those same resilient and dynamic space operations.

So today, the Space Order of Battle panel, obviously, the Secretary of the Air Force's Operational Imperatives, and I'd like to spend a second on that. Imperative means something that we have to do. When we shorten it to OIs, we forget that it is something that we have to do. And that is the Space Order of Battle. We have to get this right to be able to affect the joint war fighters and make sure that they can get the mission done that they need to do. So today, I have an incredible panel. We were mentioning that I have four women, so I am outnumbered up here. So appreciate you all doing that. But we have industry leaders. It's also great that I'm the one asking the questions, not getting asked. So I appreciate whoever set this up. But first, I'm going to do a quick introduction and then, I'm going to turn it over to them for some comments. And then, we'll get into the questions.

First, we have Mrs. Kelle Wendling. She's the President of Space Systems Sector within L3Harris' Space and Airborne Systems Segment. She's earned a Bachelor of Science Degree in Applied Mathematics and Computer Science and an MBA from the Florida Institute of Technology. She's also a graduate of the Harris Leadership Directions Program at the University of Virginia Darden School of Business. And she's completed a Northwestern University of Kellogg School of Management Product Design and Development program. Next, we have Ms. Diane Ashley, who is the Managing Director at National Security Space Deloitte Consulting. She has an extensive experience in IT modernization for federal defense, intelligent, and state customers. She also received a Bachelor's Degree in Systems Engineering management from the United States Military Academy at West Point and her master's in space operations from the University of Colorado. She's a veteran of the United States Air Force, where she worked in civil engineering at various deployed locations.

Next, we have Amy Hopkins. She is the Vice President and General Manager of Peraton's National Security Space Business Unit, where she oversees the work of many personnel supporting all aspects of



national security space enterprise. She holds a Bachelor's of Arts in International Relations from Old Dominion University, a Master's of Arts in National Security Policy Studies from George Washington University alum, and Executive Business Certificate from the Darden School of Business. She's worked at the DIA, where she's held multiple positions in support of global combatant commanders and also worked for Senator Carper when he was the governor of Delaware.

And then, last but not least, we have Ms. Maria Demaree. She's the Vice President and General Manager of National Security Space for Lockheed Martin. She's earned a Bachelor's Degree in Computer Science from Pennsylvania State University and a Master's in Systems Engineering from the University of Pennsylvania. She's been the Vice President and General Manager of Mission Systems and the Vice President and General Manager of Engineering Mission Systems and Operations in her role at Lockheed Martin Space Systems. All right, please help me welcome our distinguished panel members. All right, I will turn it over to Kelle for the first part.

Kelle Wendling:

Sure. Thank you so much. Well, thank you so much, General Schiess, for having us on the panel, and it is great to have four female executives. So shout out to AFA for making that happen. At the risk of probably dating myself, which I will, it was about 20 years ago that I was a program manager, back when it was Harris Corporation. And I delivered a system that was called CCS, or the Counter Communications System. Interestingly enough, it was highly classified, it was unacknowledged, and it was delivered at a time when the United States really had an opportunity to be unrivaled in space superiority.

And so, the challenge I see is I've moved, over the last 20 years, through our intel and cyber and DOD and even our air traffic control businesses. I've took over space about 18 months ago, and I cannot tell you the keen sense of urgency and imperative that we do feel to be able to ensure that we are acting quickly and smartly and collaboratively, to be able to address Operational Imperative No. 1, Space Order of Battle. We have seen what our adversaries can do and what their potential is. And absolutely, I can't think of a higher priority for us to be talking about and for us to be focused on within the US government today. Looking forward to talking to you on the panel.

Maj. Gen. Douglas A. Schiess:

Thank you. Diane?

Diane Ashley:

Hey, everyone. Diane Ashley. It's a delight to be here, and I agree with the panel of women. I want to share with you a question first. Does anyone know when humans first used a celestial vantage point to oversee a battlefield? All right, Secretary Kendall started this, because he started with a history lesson. So anybody have a good guess? First time? 1914, nope. Go back. Go back. No? Anyone want to guess? 1794, French Revolution. It was France had an aerostatic core, and they had tethered hydrogen balloons. And they had a motley crew of chemists and carpenters, who they sent up, to say, "Oh, maybe we could see something if we go up this way." And they ended up winning that battle. It actually was a location that's over now Belgium.

But what I find interesting is ballooning actually didn't come into its own until about 60 or 70 years later in the Civil War. And then, fast forward, and in 1914, as we all know what was going on there, there was still some military ballooning, but it was quickly eclipsed, of course, by the airplane. I'm going to fast forward again into the 1960s, and that's when satellites first appeared in the trajectory of the battlefield. Think about how long we've had since then, and I point that out, because military ballooning took a while to even really realize how to get used. And when we think about space order of battle,



we've had satellites now for a while, and we're just now really starting to figure out how to use them. So I'm excited to talk about that today. Thank you.

Maj. Gen. Douglas A. Schiess:

All right, thanks. Amy?

Amy Hopkins:

Thank you again for inviting me to this panel. There's one thought that I'd like all of us to consider as we sit through this panel today. And my good friend, General Salty Saltzman has stated that our current space architectures favor the actor that goes on the offensive first and that this is an unstable condition that works against deterring attacks on space assets. I'd like to tighten that up just a bit. It's not the first move in space that gets the advantage. It's the first correct move. So I'd like to take a page out of General "Zatar" Deptula, who I believe trained and taught many of us on this idea of critical node analysis. We can have the most exquisite flying satellites in space. We can have mesh networks of thousands of satellites in space, but alone, they won't deter an adversary if we can't ensure that the integrity of the information isn't resilient and reliable.

During Desert Storm, there was a bridge that crossed the Tigris, or sorry, operation during the early nineties, I'm going to age myself here as well, there was a bridge that crossed the Tigris into Iraq that was targeted. We targeted this bridge, not to limit maneuver, but the critical communications that were connected to an Iraqi air defense center ran under that structure. By targeting that bridge, we disconnected a critical node of the Iraqi air defenses. So to that end, if we aren't putting the same level of effort behind our ground architecture, that supports all of our assets in space, we could have all the best assets, but unless we intend for them to be orbiting hunks of metal, that cannot produce any effect, we have to be working far left of bang in order to ensure that that grand architecture enables that first mover critical advantage. Have we done the critical node analysis to show us and ensure the reliability, the defendability, and the resilience of our ground architecture? So something to consider as we talk throughout the day. Thank you.

Maj. Gen. Douglas A. Schiess:

Thanks. Maria?

Maria Demaree:

Thank you.

Amy Hopkins:

Clearly, I have fans in the back. I'll pay you later.

Maria Demaree:

There you go. They're raising their hands in the back. So thank you for the opportunity to be here today talking about space order of battle, the number one Operational Imperative and most important. And for our Air Force and our joint forces to be able to project power abroad during conflict, it's going to be critical that the Space Force and the intelligence community be resilient to adversary action against our space capabilities. And equally important, it's important to protect our joint forces in these conflicts by denying our adversary's access to their space capabilities. So as we think about this domain, the space domain, it's important that we have both offensive and defensive robust capabilities, a suite of



capabilities, because that is what will ultimately, as Kendall talked about this morning, will deter the conflict in the first place. We want to have credibility, so that the conflict never starts. So I look forward to being a part of this panel and the dialogue today, and I think this being on 9/11 is an important day for us to have this conversation. I can't think of a more relevant time, so thank you.

Maj. Gen. Douglas A. Schiess:

Thank you. All right, so Kelle, you brought up CCS and having been a person that's commanded units that has worked with counter communication systems across the world. Obviously, at one time and still, that was a new technology, but how do you think now we best achieve space superiority with the current technology we have right now?

Kelle Wendling:

No. I think it's a great question, and I actually, as I reflected on how long it's been since we fielded that and what we've done to improve it, I'm not so sure the challenge we have today is with respect to the technology. We have the technology, we have usually employed it in other domains, either land, air, or maritime. What we really need to do is transition that capability into the space domain and make it so that space, especially with an INDOPACOM conflict, is the new high ground. And so, as I look at it, I think it's less about a technology challenge and more about imparting technology we have on orbit reprogrammability, ability to have responsive solutions, moving away from the exquisite nature of some of the long-term, long cycle NRE development and doing reuse, maybe even leveraging commercial technologies that we need to bring to bear, dynamic retasking, elements of those things that are actually more capable to give us a platform and space to build on and add to, and to be able to be used in ways that previously maybe we didn't think about it.

So we absolutely need to be able to address the cost and schedule challenge. We need to put more capability, more flexible capability, on orbit faster. And so, when I look at it, I don't think it's that we can't be superior in space. I think we just have to change the paradigm, and that's us as government contractors. And it's also the government themselves across our Title 10 and Title 50 customers that we need to move at this pace of urgency. You called it an imperative. I think it's the exact right word. For me, coming back, as I said, to space about 18 months ago, that urgency of, wow, we can see the potential in what our adversaries are trying to do and what they are already doing, that requires us to make that transition and we need to do it faster.

And I can't think that there's anything more that we need to do than making sure that perfect is the enemy of good enough. And we need to have the conversation about "Let's go." And that's not traditionally what we do in space, but I think we all need to really kind of gravitate to that paradigm shift and work together to be able to move at a different pace. I think it's about pace more than it is about technology.

Maj. Gen. Douglas A. Schiess:

Well, thanks.

Amy Hopkins:

If I may go off script, I'd love to make a comment about that.

Maj. Gen. Douglas A. Schiess:

Sure, go ahead.



Amy Hopkins:

I'm sorry. I'm already throwing a rock into our schedule.

Maj. Gen. Douglas A. Schiess:

It's all good.

Amy Hopkins:

I think the thinking that we can attain and maintain space superiority is really fraught with hubris. We learned this lesson 20, 30 years ago in the air domain, only to learn that the complex evolving nature of the battle space requires us to acknowledge that there's a temporal aspect to this and realize that we are only going to really have episodic instances of space superiority. Therefore, I think the question should be, are we prepared and trained to maximize the effects when we have that? And do we know what to do when we don't? Are we joint and coalition enough to yield the necessary effects when we have this temporal space superiority opportunity? Do we have this window?

And can we execute a joint and coalition air, sea, land, subsurface beating, with such magnitude, during that window, that we can achieve the maximum effects and really no adversary can then stay ahead of what we have presented forward? So I think we again need to think about this. Let's not relearn the lessons of the past and understand, are we training and exercising to this idea of the temporal aspect of the space superiority, when we have it and when we will not have it?

Maj. Gen. Douglas A. Schiess:

Okay, thanks. So Diane, on that temporal space superiority, but also coming back to commercial and how do we bring stuff off the shelf, what sort of communities of practice or government led initiatives would you highlight as being a best practice or promising initiative to better share and integrate across the extremely complex fabric of our military and our commercial space?

Diane Ashley:

So I should start with AFA, right? Here's one, we're sitting here. And I'm going to point out to all of you all in uniform and the government folks, what you do matters, and the example you set and where you choose to spend your time, we pay attention to that and we will follow where you go. We try to lead also, but we pay attention to where you're going. So I'll give you that. There's two I want to highlight, besides AFA, of course. There's a new organization called the Space ISAC. Anyone heard of Space ISAC yet? Yeah? There we go. All right. That's right. We are Deloitte's founding member. There's my little radio plug, but I am pointing it out, because if you've been following any of the legislative updates, space is supposed to be designated as a critical infrastructure. And there are currently 16 other critical infrastructure designated areas, energy, water, imagine those things. And they all have their own communities of interest, and they're sharing...

The Energy ISAC has been around since, I think, '99, super strong. The Space ISAC is intended to do, it's the information sharing and analysis center. If you are not familiar, I recommend looking it up. It's an opportunity. It's based out of Colorado Springs. There's a watch floor, where companies can come together, along with the military, who are interested, to share threat information. Those are the kinds of things that make us better for space order of battle, because we all know that the commercial interests are growing just as strong as national security interests. And that's the point of designating it as a critical infrastructure, economic stability, as well as national security. And I see no other place that comes together more than in space, when you bring that economic piece together with national security. Super critical.



So I'll highlight this Space ISAC. And then, one more thing, because we talk about the economic stability, and I'll point out the economic opportunity, the more robust the economic opportunity is in space, the more we're going to have providers who are going and doing things. Look at the volume of people here, look at the number of exhibitors on the exhibit floor. Strong, strong interest in space, because we recognize that there's a profit to be made and that's great for national security. And we also recognize that, if it doesn't get enabled right by the right policies and legislations, well, it might be too hard to do business. And as the Space Force has more and more national security interests that are solely provided by commercial providers, making sure that there is a holistic view of how to enable that marketplace for the longterm is going to be extremely important.

Maj. Gen. Douglas A. Schiess:

Thanks. Maria? Obviously, we've talked about risks and commercial. So as we recognize the need for cooperation in the space order of battle between the US, our friends, our allies, even our commercial companies, in light of this, what are the most critical enablers from a policy security training infrastructure perspective to ensure such success across each of these cooperations?

Maria Demaree:

Yes. So from an enabler's perspective and a policy, one of the most important things is going to be establishing what we want to be the acceptable norms and behaviors in space. And we know it's no secret that our adversaries over the last 10 years have been building counter space capabilities. And they're doing that, because they understand the importance of space to this nation, to our economy, to our way of life, to our national security. And so, as they've built these capabilities, it's important for us to be working with our allies and partners to really come to consensus on what those norms and behaviors are and to hold accountable those nations that are doing nefarious things in space. We have capabilities and policies, like the Outer Space Treaty, that has over a hundred nations that have signed it, including Russia and China. But we also know that our adversaries will deviate from things that they commit to.

And it's also important for us, as we talk about policies, to make sure that the policies that we set help us, especially working with our allies and partners. And by that, I'm talking about things like classification levels and export policies as well. From a security perspective, space domain awareness is key. Our ability to track and identify and characterize what's happening in space will help us to be able to maintain security and sustainability and security for both ourselves and our allies and partners. From a training perspective, it's important for us to continue to have the superior talent that we've enjoyed in this nation. Our government, the United States Government, is the number one investor in space, and it's important for that to lead to investment as well in STEM, through our educational system.

And we talk about train like you fight, and it's important for us to be looking at our war gaming and our experimentation exercises that we're all actively participating in. And how do we make them even more impactful? How do we work together to get us for more combat readiness, as we move forward? And the last part, the infrastructure is really about our industries understanding the demand signals coming in from our customers, being able to respond at speed and scale, with the hardware and software that's needed. We need to be focused on open standards and sharing of information in that way and making sure that we're just fostering that interoperability across both our joint forces, as well as our allies and partners.

Maj. Gen. Douglas A. Schiess:

Thank you. So Amy, you talked about the temporal part of space superiority, and we've talked also about commercial. How can the Space Force better leverage support from the commercial sector to get





after what we're doing? And then, a second question on that. What support is needed for day-to-day space operations, as maybe we go from competition to conflict, maybe back to competition?

Amy Hopkins:

So it's been amazing to watch, over the course of my entire career, the explosion of the commercial space sector. We already have a history of leveraging commercial. Look at Satcom, look at Launch, look at the unprecedented capability that was brought to bear with unclassified imagery. Never in my career would I have ever thought we would be able to use unclassified radar capability to support an ongoing activity and catch an adversary off guard, who was completely unprepared for how much we could bring to bear and leverage the commercial sector in the war in Ukraine.

However, I'd like to propose that, no pun intended, we open our aperture just a little bit on this. We are looking at... Our primary solutions are about proliferating more satellites in space. We all talk about having less of the juicy targets. "Let's have mesh networks of hundreds, if not thousands, of satellites in space." I would argue that we're too focused on the article, the satellite itself. It's a widget. The proliferation should actually be about encouraging the industrial base to proliferate the development in the fielding of this capability. We don't need three or five companies producing thousands of satellites. We need 50 companies producing thousands of satellites. I want to go back to my comment earlier about nodal analysis. The adversary is working far left of bang. Why would we give them three to five juicy industrial base targets? Why not give them 50 that are funded and developing these satellites that have to go into space? The commercial sector, the entire industrial base, must be considered an element of our war fighting arm. And the second part of your question?

Maj. Gen. Douglas A. Schiess:

Well, how do we get after that as we go from competition to conflict, then back to competition? Does that change anything? I think, from the industrial based, it's not necessarily..

Amy Hopkins:

I don't think it changes anything. It should be seamless. It should be transparent. Again, as we talk about this, when juicy targets, the targets aren't just the satellites in space. We have to think broader than that. Again, if we can invest in and expand and proliferate that industrial base, imagine how much more capable we could become and imagine the fog that we could then impact that potential adversary.

Maj. Gen. Douglas A. Schiess:

Thank you. All right, Kelle, so this question's near and dear to my heart, as a component commander, integrated space command and control. What are the gaps in an integrated common operating picture, related to command and control, being provided by the DOD or other partners, commercials, allies? How can we get after that?

Kelle Wendling:

Sure. And I think this is one of the most compelling problems that we need to go address. And it's a hard one, because it requires that common operating picture to have a lot of collaboration and communication across the industry. And I actually think the biggest challenge that we have is policy today. Maria talked a little bit about it with classifications. It shouldn't matter who's procuring the satellite or who's launching the satellite or who's operating the satellite or the ground stations. We all need to focus on how to get the right data to the right place at the right time for the war fighter mission. That requires us to put down a lot of competition challenges. And you're seeing, I think, a little bit of



that in industry. It's requiring us to leverage commercial infrastructure. It requires us to have conversations about charters and budgets inside the government, because that's a big impediment. And I think these things all combine to be a very challenging ecosystem for us to say this is something we need to set aside to be able to move forward collaboratively.

I think I would kind of frame it as our adversaries, thankfully, we're a democracy, our adversaries are not. They are not arguing about whose charter it is to do which mission. They are not fighting a continuing resolution again, serve how many years. They are moving forward. And unfortunately, I think we are self constrained, given the environment we're in. And it's really going to take a lot of gumption frankly, to be able to say, "We're going to do this differently. We're going to work together. We want to leverage commercial." I'll have to foot stomp Maria's point on classifications.

Compartments are going to make this very, very difficult, not just for... I'm trying to have a meeting with my team, and it's not easy to do. I can't share across my L3Harris enterprise, because of the SAP compartments. At the same time, bringing commercials and allies in, it's even a further deterrent. And yet, this is a time when we really should be leveraging that and moving forward in that. So I think it's incumbent upon us to set aside a lot of them to social norms and the norms that have been in place and question ourselves about, "How are we going to go do this differently as a community so that we can address the war fighter imperatives?"

Maj. Gen. Douglas A. Schiess:

Thank you. All right, Diane, so probably many in the room have heard that the Space Force is looking into a framework around commercial augmentation space reserve. And so, how do you see that helping with the space order or battle?

Diane Ashley:

Okay, so raise your hand if you've heard of CASR, Commercial Augmentation Space Reserve. I know my team, you responded to the RFIs right there. Okay, good. Anyone here familiar with CRAF, Civil Reserve Air Fleet? Yeah. This is essentially Space Force's attempt to do the same thing. And this is a really interesting question, and I think it's important for us to discuss with kind of out of the box thinking. We all know how important commercial is, particularly around space, space sensors. General Guetlein talks all the time about exploit, buy, and build. It's the pinnacle of exploit and buy, when you've got commercial involved. And so, the CASR framework is attempting to get after that. And I saw Colonel Kniseley this morning, I know he's not in here, because he's in General Guetlein's session. That is tough competition to have them right next door.

But I said, "Hey, we're going to talk about CASR." And he goes. And I said, "You know how it's supposed to be surge similar to CRAF?" And he goes, "What I want to pass along is the importance of it, understanding in peacetime operations." That in peacetime, we integrate those resources, not just when you surge, because we all know that, if you have it kind of as your thread underneath, similar to CRAF, when it was time to evacuate a whole lot of people out of Afghanistan, it was ready and it was seamless. That's the kind of capacity thinking that is important. And so, I was excited to see that. This was when I was going to show a little video, but we have no video. So you get to hear me talk about what the video was.

The reason I was going to show this video is because in order to exploit, buy, build and how CASR is doing things is we have to use the data that exists. How do we know what's going on in space? And there's always the attribution question. And how do we make maneuvers? And General Schiess, you know this better than anyone, how do we shorten the amount of time to make a decision? And I was going to show a little demo that we'd pulled together, essentially cat and mouse demo, of red asset,





blue asset. It's just a globe with little things going around it. But the point is we used AI training, we trained our AI on the Unified Data Library, if you're not familiar with that, there's a whole lot of data in there, sensor data, historical as well as near real time. And so, we trained on that data and were able to show a red threat coming after a blue satellite.

And we had already uploaded commander's intent that it would maneuver out of the way, at least a thousand kilometers, save fuel, avoid ground detection. And there was one other thing. There were like four primary things that we were trying to do with that. And what happens is the AI model gets it down, it deorbits a little, so it can go faster, increase that distance, and then maneuver back. All of that happened autonomously. That can then be translated into TTPs, for an operator to take a look at. Then all of a sudden, the operator can say, because we all know we want a human in the loop, the operator can say, "Click. Yeah, I like that one, let's go."

As opposed to taking hours, sometimes days, to make these kinds of important decisions, you can do it in minutes. That's the kind of thing that has to happen when we're integrating, in peacetime, commercial capabilities, those kinds of things. And hopefully, many of you all out here are expanding your ideas on how to do that. But AI, good old fashioned AI, not GenAI, is how we did it in that one. But that's going to be important capability to show more autonomous operations and integration with a commercial.

Maj. Gen. Douglas A. Schiess:

Thank you. When we found out we didn't have the video, I did try to talk Diane into actually acting it out, but we didn't work on that. All right, so Maria, so we've talked quite a bit about architectures today and how we want to get away from juicy targets and get to that. How can industry work with the government counterparts to accelerate this transition to these new space architectures?

Maria Demaree:

So things that industry can do right away are really focus our internal research and development, our IRAD, towards our customers' most compelling and important needs, and really use that as our capability to raise our technical readiness level, our TRL, drive down non-recurring, and use capabilities that we have accessible to us at this time. And across industry, I know we're all starting to really lean in on leveraging digital and model-based enterprise approaches to things. And I think, to your point, we need to think not just about the satellite, it's about the whole ecosystem. It's about the ground, it's about interconnected constellations, it's about a cyber hardened network. So it's not just the satellites that are important for us to really move to these next gen architectures. It's going to be important for us to think about the entire system that we're building.

Maj. Gen. Douglas A. Schiess:

Thanks. Amy, I'm going to put you on the spot a little bit on this one. So you talked about commercial and how we go there, but I know you've had extensive experience in the intelligence community as well. How can the Space Force work for these architectures or how we work through commercial or whatever with our intelligence community partners to get after this space order of battle? At an unclassified level? Just kidding.

Amy Hopkins:

You mean not at the Rel Gaylord level?

Maj. Gen. Douglas A. Schiess:



Yeah, the Rel Gaylord's fine. That's good.

Amy Hopkins:

Okay, I can do Rel Gaylord? To me, I'm going to keep it simple person. It boils down to we have to train how we're going to fight. We all know we're going to leverage commercial capabilities. We all know everything again from rapid launch to SATCOM to ISR to [inaudible 00:36:08] . I don't care what your mission is. If we aren't currently training and exercising how we're going to fight, we are already then at a disadvantage. The more you can incorporate your commercial partners into the training and the exercises, the better positioned we will be for the fight that is yet to come. If we wait to train or if we wait to fight until the fight unfolds, we've lost the fight.

Maj. Gen. Douglas A. Schiess:

Thank you. All right, we only have a few minutes left. I feel like I'm at a congressional hearing with this lights right here. So I'm going to go backwards here and just give you a couple minutes to 30 seconds to closing comments. So Maria?

Maria Demaree:

Well, I do think it's important to also identify that we see both our customer set and industry moving more, trying to find that balance between mission assurance and taking more risk. And I think that accelerates us moving to these new architectures and training more effectively, like you just described. So I think the conversation is really important to stay open with industries, our allied partners, our commercial partners, and looking at, where is that balance going to be? And how do we jointly get there together? Thank you for the time on the panel today.

Maj. Gen. Douglas A. Schiess:

And they just gave me more time, so I don't... All right. I don't know how that happened, so anything else you want to say, Maria, before I...?

Maria Demaree:

I'm good.

Maj. Gen. Douglas A. Schiess:

Okay. All right. Amy?

Amy Hopkins:

I'd like to say, especially having spent a career as a civil servant, spent time on Capitol Hill, and now a career in industry, we're partners here. Please, as industry is working to prioritize how we spend our IRAD, how we are working to invest, if I had one more dollar to spend, don't make us guess. Because I can be sure, I'm good, but I'm probably going to guess wrong. And if I guess wrong, now I have put you, as a war fighter, at a disadvantage. We have to work together. Don't make us guess on how and where we should be making our next dollar investment.

Maj. Gen. Douglas A. Schiess:

All right. Diane?



Diane Ashley:

I agree with you, Amy. Even the demo that you guys, it does exist. I didn't make it up, but we did that based on lots of conversations with many of you all in uniform. But it's interesting. So last week, I had a call with several of our Deloitte firms internationally, Japan, UK, Australia, New Zealand. It was really interesting, and I said, "Hey, I'm coming to this Air and Space Forces Association thing, and anything you guys want me to keep an eye out for?" But by the way, in London right now, there's this conference called DSEI. We had to split time. I wish I could be at both, but they said, "Just take a look around and see what kinds of technologies are being leveraged." And I thought, "They're right."

Because we share notes with each other. There are things going on in Saudi Arabia around space that we hear about. There's a lot of things that are kind of upstarts in Japan and they look to us, but we're also looking to them. So I'll encourage all of you all to make a couple laps in the expo hall and ask hard questions. We all pay a lot of money to put a booth down there, so go spend some time there. But it'll also make you a little bit smarter and maybe poke and prod and say, "Well, where'd you get that use case?" Because they're all going to try to show you how all the great ideas are. But find out where the use case came from and go, "Oh, that's interesting." And see how much of that technology can be integrated across our services, because it's going to make you smarter and it's going to help us refine our ideas. So thank you.

Maj. Gen. Douglas A. Schiess:

Thank you. Kelle?

Kelle Wendling:

Sure. I'll echo what Maria said about collaboration and certainly Amy with the IRAD. Again, we have significant resources at our disposal in the industry. Don't let us spend it foolishly. If we're not being open about what our portfolios look like, press us, because we should be sharing, so we maximize that. The other thing I'll say is I remember last year I was at an industry day for SUPARCO and we couldn't even say space is a war fighting domain. I think we all know today it is. And we're more acknowledging it, both defensive and offensive. I go back again to it is imperative that we start to work to get capability on orbit faster. Look at the satellites that we have up there already or the ones that we're going to launch or the ground systems as our platform. It might not be an airframe, it might not be an aircraft carrier, but it is a platform for us to put capabilities and applications and missions on.

And as we get to that reprogrammability and the technology refresh and augmentation we're looking towards, we can continually do things with those platforms and upgrade them and add new capability, where we didn't have the opportunity to do that before, whether it's protect and defend or whether it's on what we used to call freedom of maneuver. We needed euphemisms for offensive. But obviously, our adversaries, as I said, they're not slowing down, they're not having debates, they're not budget constrained. And that's all part and parcel of the way our organizations and our government works. But we definitely need to make sure that we put down all those kind of charter battles and have the conversation about war fighter first.

Maj. Gen. Douglas A. Schiess:

All right, thanks. So with our extra innings that we have here, I'm going to do a speed round here. The Space Force is coming up on its fourth birthday here in December. So some may argue that we're pre-Kindergarten, as we go forward, but there is a lot of things that the Space Force has to do to get after the imperative that the Secretary of the Air Force has done and the lines of efforts that the Chief of



Space Operations has asked us. If you had one thing that you wanted the Space Force to get after in our fifth year, what would that be? And sorry, Maria, I'm putting you on the spot. You get to go first.

Maria Demaree:

I think it's imperative that we be really focused on JADC2, Joint All-Domain Command and Control, and understanding that space is all domain, I think, is a really key concept. It can reach all the domains. It is absolutely critical and imperative. It's central really to JADC2. And I think that I'd love to see us really lean into that over the next year and be ready to support that.

Maj. Gen. Douglas A. Schiess:

Great. Thanks. Amy?

Amy Hopkins:

I would like to encourage that we make sure that we remember the lessons of the services that came before us. Don't relearn them. A lot of them are the same. So when I hear words like "unique, I think stove pipe. Don't relearn the lessons of the past as you go forward.

Maj. Gen. Douglas A. Schiess:

Diane.

Diane Ashley:

Okay, so I think it's going to be cyber and space, two missions that come together. It's like one team, one fight, but I'll say cyber and space. We've got to get better at that and it has to come together. And thinking about each independently is not going to cut it. We've got to bring them together.

Maj. Gen. Douglas A. Schiess:

Great. Kelle?

Kelle Wendling:

I think I would go back to saying we've got to watch the acquisitions. We've seen some stuff with the Space Development Agency. They've been able to move at very lightning pace for all government. There's good and bad to that, but we definitely need to change the pace of what we're doing. And so, back to let's use everything at our disposal and not self-constrain. We might tend to do that as government contractors and as the government of what we can and can't do. Let's question why we've done it that way and what's the better way to do it.

Maj. Gen. Douglas A. Schiess:

Great. So I want to say thanks to the Air & Space Force Association for putting on this panel. I think we have another space order of battle panel later this week, so tune into that one as well. Thanks for the great discussion. We are out of time, but I want to say thank you for sharing your thoughts and for the audience members for being here. Great panel. As we move forward, as a successful nation, we need to continue to strive to have success in the space domain. So can we give a hand to the crowd here? Thank you.