

**Remarks by Gen. Stephen Whiting, U.S. Space Command commander,
at the 2024 Space Force Association's Spacepower Conference, 11 Dec 2024.**

Remarks as delivered

It's tremendous to be at Spacepower number two, congratulations to the Space Force Association. Last year's conference was fantastic, and this one is even better. And it's really a privilege for me to be here today.

You know, I'm here as a proud guardian, a member of our small, unique elite service that's responsible for being the one service focused on the space domain. But I'm also here as the commander of U.S. Space Command. And it's interesting that these two organizations were created five years ago, back in 2019 because our nation realized we were not organized properly for the threats that we now face in the space domain, threats that were no longer future possibilities, but now were operational realities. And so these two organizations were birthed in great power competition right from the beginning.

And you know, it's the only pairing of a service and a combatant command exclusively focused on the same domain. And that definitely means we're a unique team and we're a small team. You take all the uniform guardians, all the civilian guardians, all of us at headquarters, U.S. Space Command, and even the space cadres of the other services, we remain an incredibly small team performing vital functions for our nation.

And so certainly for those of us in U.S. Space Command, we realize our success is bound up in the success of the Space Force, who provides us the vast majority of our forces and capability. And I think it's also true that the success of the Space Force is bound up in the success of U.S. Space Command as well. But this small team that we're all a part of, we also have to realize our success is bound up in the success of others as well.

[video clip emphasizing importance of teamwork]

Great show. And if you've seen Ted Lasso, Coach Lasso there is talking to the best player on the team, Jamie Tart. Jamie is fantastic. And sometimes he forgets that he's part of a bigger team. And certainly our small, unique space team, we're part of a bigger team, and that bigger team is the joint force.

Now I actually think both the Space Force and Space Command understand we are one or two of 11. We are part of this bigger team, and that's why U.S. Space Command, whenever we talk about this unique pairing of Space Command and Space Force, we always then quickly follow with the contributions of the other services – the Army, the Navy, the Air Force, Marines – all not only provide human capital expertise to our headquarters, which makes us a better combatant command, but they're all also developing capability that helps them get after their mission, but also helps us get after our mission, with components and forces, even the United States Coast Guard provides us one person that contributes at our headquarters.

I think it's the same reason that the U.S. Space Force, whenever talking about how the Space Force supports combatant commands, yes, talks about the majority of the forces going to U.S. Space Command, but also, always talks about how U.S. Space Force has to support the other 10 combatant

commands, and of course, doing that by building out space components in each of those other combatant commands, something we are certainly very supportive of.

But you know, to be successful on this broader team, us as the space team, we need to have a common playbook that tells us the skills and attributes that we have to bring to this broader Joint Force team to be successful.

Now, that broader playbook in joint doctrine is defined as something called the joint functions. The joint functions describe what those skills and capabilities are that we need to bring to the broader Joint Force, and they are the result of centuries of lessons learned and experience in the terrestrial warfighting domains. On the land, at sea, for the last 100-plus years. In the air for the last several decades, also, in cyber. And these joint functions describe what the individual players on the team, what the forces on the team, have to bring to the table to enable Joint Force commanders to synchronize, integrate and execute joint operations.

Now, every part of the joint force, including the space team, has to bring these joint functions even as they execute their unique missions. Now to describe what the joint functions are, and you can see there's seven of them. They're here on the screen. Let me. Let me create a vignette.

Imagine, if you will, a theater joint fight, much like Desert Storm, but it's space enabled. There's some belligerent country that's invaded, a third-party country, maybe that's an ally of ours, maybe it's a neutral country. And now we've been asked as a Joint Force team to go, you know, dislodge that invading country and free that third party nation.

Well, the joint functions are all operative in that vignette, you start with intelligence, including from National Reconnaissance Office ISR assets, and in the future, Space Force mobile target indicator assets that are providing indications and warning, helping the forces to understand what they're facing against red activities.

Then Information Operations from the blue side, counter enemy propaganda and set the conditions for successful combat operations. And of course, in a fight like this, satellite communications, as well as cyber are going to be linchpins for the IO fight.

The Joint Force is then synchronized and directed by command and control. Command and control takes presidential guidance and converts that into strategic plans and ultimately operational plans and down to tactical engagements that are then enabled by battle management and mission command.

Now to be successful in space, as in all other domains, you need to have joint all-domain fires, which allow you freedom of action. So, things like Navy TLAMs will be used, or United States Air Force precision-guided munitions coming off various aircraft. We'll have United States Army GMLRS, or Marine Corps HIMARS, or Yes, Space Force, counter communication system fires, all of that will need to be successful in space.

Then we must use the protection capabilities that we have, like theater missile defenses, as well as cyber, to preserve our force so that we maintain combat power throughout that fight.

Of course, a hallmark of U.S. military operations for decades has been movement and maneuver. Movement and maneuver sets the forces and then allows us to gain a position of advantage relative to the adversary, so we can close with the adversary and ultimately destroy them.

And then finally, we have to sustain the fight in all domains, because the fight may very well be protracted, and so we've got to focus on our sustainment activities. And in fact, in the terrestrial domains, air, land and sea, there's an entire combatant command focused on ensuring that that happens successfully, and that's United States Transportation Command.

So, what are we doing as this unique, small space team, collectively to get after the joint functions in the space AOR? Let me start by talking about intelligence, because everything we do in space must be intelligence led, given the threats that are now so prominent that we have to face.

You know, I think it's in this area that perhaps we've made the most progress in the last five years, maybe even going back the last nine or 10 years, when the nation really started to realize we have lost a lot of our intelligence capacity to get after space problems. And you know, post 9/11 a lot of our intelligence community flipped over to focusing on counter terrorism operations, and that was what the nation needed. But now the nation has realized we have got to focus on the space threats of great power competition.

And so, at U.S. Space Command now our J2...almost 600 people. Now let me be the first to say the size of an organization is not its measure of merit. But when you take the great work happening in our J2 and in our JIOC, and you add to it the space professionals at the combined Space Operations Center and the National Space Defense Center who are doing the operational-level intelligence, or the great Intel guardians of Delta seven and the integrated mission deltas, or the professionals at the National Space Intel Center doing the longer range intelligence forecasts, as well as the Intel pros across the IC and across the joint force, I really believe we're starting to get after Intel for space and from space for all levels of command across the entire spectrum of conflict. Just within the last year, we've created a joint reconnaissance cell at U.S. Space Command that allows us to plan and assess ISR operations and sensitive reconnaissance operations in support of our missions.

We're also currently bringing on a new application called ION Trail. ION Trail is a machine learning and automated application that allows us to get after space order of battle and adversary readiness and disposition. Now, for the Intel pros in the room, you'll understand what I'm about to say, but this ION Trail is linked into MIDB, and when it is fully fielded, that will be how we're plugging into MIDB for the red order of battle, and that will enable all of our functions, including fires.

On the MASINT side, measure and signal intelligence, we've recently stood up a 24/7 MASINT cell as well, and that rapid analysis cell allows us to get after time dominant MASINT for high priority events, things like new foreign launches, breakups, maneuvers, other things that you can imagine going on in space, and then convert that into near real-time actionable intelligence to inform operations at the tactical, operational and strategic level.

So, we've made a ton of progress on Intel. There's more to do working with the broader IC, so that we can continue to get after being intelligence led in all that we do.

The next joint function is information. Of course, we live in an information age, and information may be the difference between victory and defeat, because it's a strategic resource now, and so we've got to be able to leverage our information and protect it. And we know the People's Republic of China is deeply focused on this. In fact, their doctrinal writings say that it is at the core of their warfighting strategies. So we must be ready.

At U.S. Space Command, we think it's so important in our domain that on our Integrated Priority List, we have as our number two priority, enhanced battle space awareness. Now if you're not familiar with an Integrated Priority List, or IPL, as we call it, it's an annual document that all combatant commands put out that highlights what the warfighting gaps are that we see to inform the services POM and acquisition processes.

So, there are some really important SDA capabilities coming online. We're very close to bringing Silent Barker into operations, and that's a vital capability for us. The Deep Space Advanced Radar concept I know that's going into acquisition and getting built. That's a vital capability. And ATLAS, I could have binned that under command and control, but it's also all about leveraging our space domain awareness data better. That's a vital capability for us as well, to close the relevant kill chains that we need to close to be successful.

Also in the information sphere, we've recently expanded Multinational Force Operation Olympic Defender. We're now at seven countries. We welcomed France and Germany two months ago, and New Zealand has got a few final pieces of paperwork to submit, and now is a seven-nation coalition. We're planning a common campaign plan, and just within the last few weeks, we approved our first seven-nation CONOPS for space domain awareness. And next year, we will develop a CONOPS for protect and defend operations with those six other nations in Olympic Defender.

We've also expanded the joint commercial operations cell, or the JCO, one of the most innovative things we're doing in our space community where, now, we have 19 international partners who are working together to track, essentially as the sun orbits, or as we orbit the sun, pardon me, they're doing operations. And in fact, we recently had a breakup on orbit where it was the JCO who was the first to detect that with their commercial sensors and then tip and queue into the Space Surveillance Network. And we have 15 companies now in the JCO that we purchase data from, and that organization is even expanding its missions beyond Space Domain Awareness, to now LEO protect and defend operations, as well as SATCOM situational awareness; surveillance, reconnaissance and tracking; and PNT situational awareness.

And then finally, DOD Space Security Classification Policy, about a year ago, right now, the DoD signed a new classification policy, that really is fantastic policy. Sometimes I think we just pointed oh, we need to fix the policy. Well, this policy allows us to take blue systems that are at high classification levels and pull them down into more rational classification levels so that we can truly plan and integrate these systems across the joint and combined force. No blue system has successfully gone through that process, and it's a difficult process, but we gotta drive that into completion because that will make us better as part of this broader warfighting team, if we can truly have the right conversations about the capabilities that we're bringing to the table.

Command and control is at the heart of military operations, because it's the ability of a commander to have authority, responsibility and direction over his or her assigned and attached forces.

Now, a fight in space is going to be complex, and it's only gaining in complexity, and so we have to get command and control right now. Let me give a shout out to the Space Force for, just about a year ago, standing up U.S. Space Forces Space, or S4S, that brought together all the capabilities that are presented to U.S. Space Command, under the leadership of Lieutenant General Doug Schiess. And shortly after that stand up of S4S, U.S. Space Command designated General Schiess as the Combined Joint Force Space Component Commander responsible for leading and executing our operations at the operational and tactical level. Now, as part of that, he leads our daily Operation Olympic Defender execution with the other partner nations, and he's also our key conduit to the space components in the other combatant commands as well.

Now another designation we've given Lt. Gen. Schiess, just within the last couple months, is I've now designated him as the Space Operations Control Authority. Now imagine that theater fight that I showed you a moment ago, there's going to be aircraft, U.S. Air Force aircraft, Navy, Marine Corps aircraft, operating near and around ground forces. So, there's a whole series of control measures that are put in place so that those aircraft can drop munitions safely with blue ground forces. Well, we're starting to build the same kind of control measures now for space and so Lt. Gen. Schiess, as the SOCA, is responsible for writing the Space Operations Control Order and then the Space Operations Control Measures to say how others might be firing into our AOR, like EW fires, as those go forward to be commanded and controlled by the other combatant commands. We'll continue to grow that capability, those control measures as we move forward, so that we can better integrate all elements of the joint force as they operate in or around our AOR.

And then command and control is one of my three primary duties. There's actually a federal law that says what the primary duties of the combatant commander are. Number one is to plan for the employment of the armed forces. So we are rigorous planning machine at U.S. Space Command. Number two is to take actions as necessary to deter, and then number three is to command assign and attached forces. So we think command and control is so important, and there's still work to do to optimize our team as part of the broader team, on command and control that we're going to designate 2025 as our year of command and control.

There's a number of things we need to get after, but I'll just mention a few here. One is the last time we've signed a Strategic Space Command and Control CONOPS was 2017. Now in calendar years, that was only seven years ago, but that might as well have been 70 years ago given all the change that we've had since then. That was before the Space Force was created, before U.S. Space Command was created. So we're going to get after updating that and having all the right conversations to make sure we're where we need to be.

Additionally, we've been working with the Department of the Air Force, the Space Force, and all the acquisition organizations to really get after closing the relevant kill chains, we saw that there were gaps with really good sensors being acquired, command and control being acquired, effectors being acquired, but the horizontal integration wasn't quite coming together. But through that work, I'm really happy with the progress we're making, and we need to continue to laser focus on that in 2025 as well.

And then finally, I think it's time for our enterprise to have a real conversation about, do we continue to consider space as this unitary whole, there's a space AOR and things happen in space, or do we really need to break down that there's unique orbital terrain, unique joint operating areas perhaps. LEO is different than GEO is different than cislunar is different than HEO, and what does that mean for us. And when does that really become a critical distinction that we need to get after. I think we need to have that intellectual discussion in 2025.

Now, like any warfighting domain, space needs the effects created by joint all domain fires to influence and affect targets. At US.. Space Command, we've been highlighting this for the past year as our number one gap on that Integrated Priority List I mentioned earlier, because if we're going to achieve space superiority, which is, of course, foundational to Joint Force success, we must have improved capability to protect and defend our space systems and influence targets in space.

Now, if 2025 is going to be our year of command and control, in hindsight, 2024 has been our year of planning at U.S. Space Command. We just signed our new campaign plan. We pulled that left, delivered that early, a year early, because we felt like we really needed to do a better job of setting conditions, reducing risk and promoting deterrence in our AOR, and we're now currently rewriting our primary Operations Plan to get after the threats that we now see to be fully integrated with the other combatant commands, and to start really fleshing out the supporting and the supported command relationships that have to take place in real-time, at scale, on a global basis. It is no longer controversial across the joint force that there will be operations in which U.S. Space Command is supported, and yeah, there's a lot of operations where we'll be supporting but that's going to happen simultaneously.

And then finally, I want to give a shout out to S4S, and the joint team that has put together their component plan to our Operations Plan that's called the JSOP, or the Joint Space Operations Plan. I wish we could brief that here, this just isn't the right venue, but this is a real operational plan, informed by intelligence, with our best space tacticians modeling and SIM has gone into it, and we have the right elements of the joint force contributing to that plan.

And let me tell you, there are parts of our joint force that are exquisite at planning how space and terrestrial warfighting integrate, because it's existential for them. The United States Navy, out in the Pacific, they think deeply about this. And we have to be able to plan at the levels that they are. And I'm proud that JSOP is doing that. Now, we have more work to do to expand the number of scenarios that JSOP is getting after, but really proud of that work and the S4S team that leads that now.

A key requirement of joint warfighting is protecting and preserving the joint forces fighting potential. I often call cyber the soft underbelly of our space enterprise, given the novel attack surface that we create with these global networks that extend out to geosynchronous orbit. And we've got a lot of cyber expertise at U.S. Space Command.

Of course, CYBERCOM gives us 16th Air Force from the U.S. Air Force as our Joint Force Headquarters Cyber, but also our Navy and Marine Corps space components are also dual headed as their cyber components. So we're getting after cyber, and we're making a lot of progress, and that includes the great work of the Space Force to get after the defensive elements of cyber, but we still have more work to do. There's more terrain that needs to be covered. There is, we need to continue to work

how to leverage offensive cyber for our purposes, and it's why in our IPL, I think we have cyber as our number four gap that we still need to continue to work after.

Now, a critical combatant command function is going through your planning process and identifying all your critical assets. And once you've identified all your critical assets, then determining what your defended assets are based on your protect and defend capability. Well, for the first time ever this year, our critical asset list now includes commercial and allied capabilities that we rely on as part of this unique space team that we're all a part of, that's part of our UCP requirements to protect and defend commercial and allied when directed. So that was an important step. We have more work to do to refine that, but I'm proud of the team that has stepped out in that direction.

And then this year, we've expanded the Commercial Integration Cell out at Vandenberg from around 10 companies up to 15 companies now, and that's part of operationalizing the Tri-Seal Agreement that we signed with the NRO and NGA where we said we would help protect and defend the companies that are supporting not only the DoD but also the IC. So out of Vandenberg, sharing threat information at the highest levels, so those companies can continue to get after their mission along with us.

Now, a special category of protection is Transregional Missile Defense, and that's rapidly growing in importance now. Transregional Missile Defense means a missile threat... missile launches in one AOR, and it's going to impact in another AOR, and we have a UCP task to provide support to that. Now the Space Force is critical on the front end of that to provide warning and discrimination of those threats. And then I know the components and the other combatant commands also, the space force components have a role in disseminating that information.

We have a joint functional component command for integrated missile defense that provides that operation and planning support to the other combatant commands. And then, of course, the Army and the Navy provides the effectors that allow other combatant commands to intercept those threats.

But this year, we've seen two salvos of attacks from Iran into Israel, where now we're seeing triple digit number of threat missiles that are incoming. So this is an area where threats are proliferating. They're democratizing and getting much more challenging. And of course, we see state actor threats like the Chinese fractional orbital bomb system and the Russian new missile system that we saw tested just within the last several weeks. So, we must continue to drive improvements in our Missile Warning and Missile Defense architectures.

Now, an irony of the space domain is that everything in our AOR is in motion, but with exceptions, but normally, rarely do we use maneuver as a way to gain positional advantage. And so we believe at U.S. Space Command, it's vital that given the threats we now see in novel orbits that are hard for us to get to, as well as the fact that Chinese have been testing on orbit refueling capability, that we need some kind of sustained space maneuver. And this is number six in our Integrated Priority List to get after something like on orbit refueling that allows us to maneuver without regret, which would then allow us to really transform space operations by taking into account maneuver warfare, as we've done in other domains.

And we're working with the Space Force on analyzing what missions, what assets, by when, could use that capability, what's the tradeoffs. But we think we need to move toward a joint function of true maneuver advantage in space.

Now we took note of the Space Forces and Boeing's announcements recently about the X-37 aerobraking maneuver. Of course, the X-37 is a test and experimentation platform, but that aerobraking maneuver allowed it to bridge multiple orbital regimes, and we think this is exactly the kind of maneuverability we'd like to see in future systems. Which will unlock a whole new series of operational concepts.

And then finally, we think we need to continue to integrate mobile terrestrial forces for things like EW, of course, CCS, or army MiGs, or a new Marine Corps capability that's coming online, or for missile warning today's MGS operated by the Air National Guard, or the next S2E2 capability that we'll get here in the near future.

And then, even for space domain awareness, we're now leveraging army, pardon me, Navy capabilities like the Aegis destroyer, and that helps fill holes in our fixed terrestrial networks, but also promotes survivability.

Now finally, there's an old saying that amateurs talk strategy and tactics and professionals talk logistics, and we saw that play out in the Russian invasion of Ukraine, where Russia was not prepared to logistically sustain their offensive operations.

Now in space, we must be prepared for protracted conflict. I think we've thought about that conflict as maybe being short, but we need to be prepared for a protracted conflict and modernize our legacy systems while we're even working to replace them. So, just within the last couple months, our J4 has published a task order out to standardize how we collect sustainment and maintenance data to ensure that our systems are meeting the dependability, availability and reliability standards that we need, and if not, then helping us to advocate for the resources that we need.

We're also now working to define the base operation support requirements on five critical bases, because base support is the lifeblood of space operations, but that's at Peterson, Schriever, Buckley, Vandenberg, and then Kwajalein Atoll for the U.S. Army. And we want to define what those standards are so we can put that demand signal on the services.

And then finally at U.S. Space Command, we're excited about the Space Forces work on the Commercial Augmentation Space Reserve, or CASR. I think that's going to come online starting next year and into 2026 and we're working with the Space Force to define the triggers for when we would want to activate the CASR to bring us additional capacity.

Now, these joint functions that I just walked through, these are the common playbook that help us as a space team to know how we bring the skills and attributes needed to be successful on this broader team. If I was to close with kind of three summations of what the challenges are that we've got to keep in mind as we develop these joint functions.

It's these three items on the slide...that first, the threats are becoming more lethal and becoming democratized, meaning that they're proliferating, and we're facing more of them, and we've got to continue to prepare for that reality. The complexity of the space fight is growing. This is a challenging

fight as we fight for space superiority, we'll take elements of the entire joint force again supporting us even while we're supporting them.

And then, we know our competitors are preparing for a space fight. President Xi Jinping of China has told the People's Liberation Army...be prepared by 2027 to militarily reunite Taiwan into the PRC. Now that's not a prediction date, but it's a be ready date. So we should take them at their word that that's when they're planning to be ready.

And of course, we've seen the reports of a Russian Nuclear ASAT potentially. We've got to prepare for that too. And what does that mean for us?

So, I'm really proud to be a part of this small, unique team with all of you as we work to bring space operations and space missions into the joint force, but I think this is the common playbook that we all need to focus on to continue to drive success. So again, it's been a pleasure to be here with you today. I look forward to taking some questions and answers with Bill, and look forward to the discussion. Thank you.

[Transition to Q&A session with Moderator SFA President and Chief Executive Officer Bill Woolf]

Mr. Woolf: Test, test. Can you hear me? Okay, we're gonna get some chairs brought up so we can sit down and have a quick fireside chat, sir. I know that's gonna take just a moment, but while we're waiting for those chairs, based on that Lasso video, I think we're seeing maybe a new call sign being created, general, I'm not sure? Does your team call you Lasso, sir, and as you're walking through the halls?

General Whiting: They have not yet.

Mr. Woolf: okay, maybe I wonder, I wonder if that's something that's going to happen. But one of the things too, is that we want to talk about is, while you're all here, the question becomes, who's defending us from China right now?

General Whiting: Yeah, fortunately, that is not dependent on me as the commander. We have outstanding young people who are sitting in all the right Operations Centers doing that today for us.

Mr. Woolf: Thanks so much for taking time the last time we spoke, sir, we were talking about being able to capture stories about the service. And SFA is happy to have executives from Hollywood here this week who are watching all of this transpire and take place, and doing research so that we can help tell the Space Force story on the big screen. So we're really excited about how. That's playing out.

But sir, specifically, I want to talk about the threats. We know the fight always begins with the threats. You were just talking about China's breathtaking pace in their space advances, and we've seen open source reports that Russia could be considering deployment of a nuclear weapon in space. What can you tell us about the threats in the domain and what this window of vulnerability could mean for not only space-based capabilities, but the joint force.

General Whiting: Yeah, thanks, Bill. You know, sometimes we easily slip into saying, Ah, space used to be so benign, so peaceful. And really, if you go back to the beginning of the space race, it was birthed in great power competition. And through the 60s, 70s and 80s, we were facing real threats in space. That's why the nation stood up U.S. Space Command in 1985 but then there did become a point, probably with the Wall coming down at the end of Desert Storm, where China wasn't sophisticated enough yet in space and Russia had run out of money, where there probably was a window where, you know, space was really benign.

From about 1990-91 up until the Chinese ASAT test of 2007 when many of us watched that in real time and we realized the world had changed. And since that time, we've only continued to see this drum beat of additional tests, additional deployments. And frankly, China in particular, you know, kind of stole our trust and the development of counterspace weapons. And so that's why I testified before Congress, that we are in a window of vulnerability, and we on the United States side, that is not where we want to be. And so we've got to continue to execute on the good investments that have been made. We've got to continue to resource the Space Force properly so that we have the capabilities we need to be successful in the face of these threats.

Mr. Woolf: Yes sir, I agree. We've been supporting and advocating for a strong Space Force for the last five years here at SFA. And I couldn't agree more, we need to make sure the Space Force is right sized for the numbers you have the Space Force writ large and then the combatant commands, the numbers you have to accomplish the congressionally mandated mission is way too low. So I think it's time to take a look at how do we right size the force to make sure you all have the capabilities you need, speaking of capabilities you need, General, we've got a lot of industry here this week, and thanks so much to all of our sponsors to make these events happen so that we can have these conversations.

But really, let's talk about how you're integrating commercial capabilities into us. Space Command, and I know the Space Force has created the CASR program, commercial augmented space reserve. So how could a program like that affect U.S. Space Command?

General Whiting: We haven't talked about this publicly yet, just because it hasn't really just come up. But last month, we just signed our updated Commercial Integration Strategy. The first one was published in 2022 and it was, it was very aspirational. Kind of looked at all the things that the space community writ large needed to do with commercial but earlier this year, when OSD signed their Commercial Integration Strategy and then the Space Force signed theirs, we said, Okay, Let's revise ours and focus on the real core U.S. Space Command tasks, and there's three in there.

Number one is to advocate and identify and advocate for capability. So we do engage with commercial industry, understand what they're bringing to the table, and then how that can inform our advocacy back to the services on what capabilities should be brought online.

Secondly, we want to incorporate and operationalize, to your question, so as the Space Force develops CASR, and that becomes real, we've got to figure out what the triggers are in the mechanisms where we can now take that added capacity that CASR could bring to us in various mission areas, and how do we operationalize that into our plan, so that you know the joint force can take advantage of that.

And then third, our third line of effort is to inform and protect. So I mentioned the UCP task that we have to protect and defend allied and commercial capabilities when directed. That's why you see out at the Commercial Integration Cell out at Vandenberg, where the companies that do the most space support that we contract with, or the most space support to the DOD and IC are now a part of that, getting information at the highest classification levels about threats, sharing information about what's going on in the domain. So that's how we at U.S. Space Command, given that others are doing things like acquisition and other things. That's how we think about how we leverage commercial into our operations.

Mr. Woolf: Thank you, sir. Well, there are certainly systems and architectures. And by the way, I love the videos. I think everybody loves the videos, the key is making those videos reality. And so we're talking about the architectures that we'd like to see available in the future.

To modernize all domain battlefield requires a joint force to modernize the way we prepare for that future conflict, in which space is integrated in the joint functions. And the joint functions are applied in space as warfighting domain, as you describe in your remarks, what cultural shifts do you feel are necessary for the collective warfighting, joint and combined force to be ready to fight and win?

General Whiting: Yeah, I'll be honest. I'm not concerned about the culture of this team. We've got a fantastically, innovative, hardworking, dedicated team.

I do think there are things we still need to work to get right, reps and sets, we need to continue to work, and maybe a few of those. This idea of we're going to be supporting and supported at the same time, which means when we're supporting, we're going to be acting at the timing and tempo of another combatant command. For example. When we're supported, others will be acting in our timing and tempo, and those timing and tempos are going to need to synchronize. Well, that is really complicated, you know, how do we battle manage that? And we've got to work through that and more work to do. And so I think that's one of those areas. We've got to continue to develop reps and sets.

I mentioned driving through to completion the new space security classification policy. You know, I want to be here and in the right rooms with the joint force and the combined force, having the real conversations about the capabilities and what they can do and on what timing. So we've got more work to do to drive that to completion.

And then I would say, you know, for maybe all of us who grew up in the space business, certainly, I grew up in the Air Force and now been a Guardian for many years. The joint planning processes aren't always as natural to us as maybe some of the other services, but that those joint planning processes, that is the language and the process of that broader joint team, and I think that's an area where we can continue to elevate that. I know the Space Force is driving that at the tactical levels and up to the deltas and all the way up to the field commands, but I think we need to continue to be well versed, not only space experts, but as joint planning experts as well, to best integrate into this broader team.

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