



## The Mitchell Forum

# Aerospace Nation with General Jeffrey Harrigian

Hosted by Lt Gen David A. Deptula, USAF retired, Dean of the Mitchell Institute of Aerospace Studies

## About the Forum

*The Forum presents innovative concepts and thought-provoking insight from aerospace experts here in the United States and across the globe. As a means to afford publishing opportunities for thoughtful perspectives, Mitchell Institute's Forum provides high visibility to writing efforts spanning issues from technology and operational concepts to defense policy and strategy.*

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## Aerospace Nation, June 29, 2020, 0900 ET

*The following is a transcription of the Mitchell Institute's Aerospace Nation virtual forum on June 29, 2020 with General Jeffrey Harrigian, Commander of U.S. Air Forces in Europe and U.S. Air Forces Africa. This discussion addresses the priorities of the U.S. Air Force in an AOR containing some of the oldest and closest allies of the United States whose partnerships will remain critical in the decades to come.*

**Lt Gen David A. DEPTULA:** Well good morning ladies and gentlemen. Good afternoon for those of you on the continent of Europe. I'm Dave Deptula, Dean of the Mitchell Institute for Aerospace Studies. I'd like to extend a warm welcome and thanks to General "Cobra" Harrigian for joining us today. He holds multiple positions: Commander U.S. Air Forces in Europe; Commander U.S.



General Jeffrey "Cobra" Harrigian, Commander of U.S. Air Forces in Europe and U.S. Air Forces Africa.

[U.S. Air Force Photo via Twitter](#)

Air Forces Africa; Commander Allied Air Command Headquarters at Rammstein Air Base, Germany; and Director of the Joint Air Power Combat Center in Kalkar, Germany. I'd like to begin by saying that the nation is most fortunate to have someone of General Harrigian's caliber serving as a leader in such an important area of operations. He's led airmen in combat in his previous assignments as the Combined Forces' Air Component Commander at CENTCOM, he's deeply experienced as an F-22 pilot, and he's commanded in numerous key positions. Most of all, he's a leader who simply gets it when it comes to the effective employment of aerospace power. With that, Cobra, I'd like to turn it over to you to share with us what issues are at the top of your priority list these days. So, over to you.

**General Jeffrey HARRIGIAN:** Thanks, General Deptula, and thanks everyone for tuning in. It's a great opportunity to talk just a little bit about what our airmen, the Joint Force, and our partners are doing here in Europe and Africa. I think it's only appropriate that I would start to talk about our priorities here and some of the things that have been ongoing. As with any priority, I think we have to talk about our people. That's where everything starts, and, fundamentally, as all have watched over the course of the last several months our folks have worked through the challenges of COVID, found ways to take care not only of themselves but their families as well, and done that in a way that has allowed us to continue our operations across the AOR. And I think it's important to remind folks where we're operating. We're talking from the high north into the Baltics, down into the Med, the Black Sea, West Africa, East Africa—there's no lack of operations that have been ongoing throughout this entire time

period. It's been key for us to work through how we best take care of our folks and their families, particularly in the European and African environment while recognizing that plenty of them had families that are back in the States working through the challenges of COVID. As we've done that, we've tried to additionally stay clear-eyed about our readiness, particularly for our forces here in Europe, and we've done that, really, by staying close to our partners and finding ways to train with them and look for opportunities that may have not presented themselves previously. By leveraging distributed capabilities to both brief, fly, and debrief, we've been able to sustain a level of readiness that, frankly, is now on the increase, acknowledging that for a period of time, we did take a hit. As we look at the other priority for me, it really has to do with our posture and ensuring that we talk about not only airplanes but also about people and the logistics support to facilitate the required relationships with our partners to be able to execute the operations that we've been tasked in support of—not only EUCOM but also AFRICOM, and that posture, as you know, is continually reviewed and is one that we've worked hard to ensure, particularly from a logistic perspective when you think about 104 nations there. From the challenges of operating up in the Arctic to the vast distances we talked about in Africa, that's been something that remains directly in our sights here. Finally, the other key priority for us is really working the relationships required to ensure that we've got the trust and confidence with our partners. As everyone on the net knows, you cannot surge trust, and this is something that, as an insider force here in Europe, particularly, we've got to find ways to continue to build those relationships and find those mechanisms

that allow us to be more than just friends but fully interoperable partners—ones that are willing to step into the fight together to achieve those specific capabilities required to have the muscle memory that allows us to not only deter but also be prepared to defend. So that's kind of a quick synopsis of the priorities and things that are up front on our minds over here, and happy to go in on any one of those that you're interested in.

**DEPTULA:** Well thanks for that great overview Cobra. When we look at today's combat aircraft inventory, we see a force in transition. Our 4<sup>th</sup> generation fighter capacity is growing, but we still have a significant number of 1980s-built 4<sup>th</sup> generation fighters. At the same time, we look forward to the B-21, we appreciate the few B-2s that we have, but we're still relying on non-stealth B-1s and B-52s for the bulk of the bomber force. My sense is that demand for 5<sup>th</sup> generation is growing, and while the areas of pragmatic survivable execution for older types is shrinking, given the rapid ascent of adversary capabilities, how do you rack and stack the attributes that you need to execute your missions if it came to combat?

**HARRIGIAN:** Well you know this is one of my favorite questions, and I'll be really frank with you. I think it's important that as an Air Force we don't forget where we came from, and it starts with air superiority. We need to make sure that as we work through the challenges of what could potentially be a fairly austere budget environment that we're able to be clear-eyed about the capabilities that we're going to need to operate, both from a stand-in perspective and a stand-off perspective, to achieve air superiority. I recognize there will be challenges associated with that, but I would argue that unless you gain air superiority, all the other things that we

would want to accomplish, particularly with the joint force, will be very difficult to achieve. When you look across any operation and our reliance on achieving air superiority, whether it be temporal or complete air dominance, it will underpin our joint success. I think as we look at that, and we remind ourselves of the importance of that, it should inform, I would offer, some of the decisions, particularly as we move forward here. Having said that, I am fully supportive of where we're going with JADC2 and enabling it with the Advanced Battle Management System (ABMS). I think the recognition that as we take the big idea and operationalize it, for us here particularly in Europe, it will be imperative that we start bringing capabilities in the way the chief and those that have been working this problem set have envisioned, and leave behind experiments. Those types of capabilities must contribute to what we're providing in the toolkit for the warfighter so that they can have some skin in the game with respect to understanding what ABMS in support of JADC2 is going to bring. At the end of the day, we've got to be able to operate at speed, we've got to be able to make decisions in a manner that allows us to quickly maintain our advantage over the adversary and allow us, again, to maintain that air superiority, and I think that will be imperative. Having said that, when you talk about 4<sup>th</sup>/5<sup>th</sup> gen interoperability, B-21s and the bomber force there, one of the key challenges that we continue to analyze and work through from a TTP perspective with these capabilities is the counter-IADS problem set. Getting after integrated air defense systems, particularly those that the Russians possess, is one that I would offer to you. We don't want to train once every three months. General Deptula, having been a previous eagle guy, you would know that finding your group was your job, you



USAFE F-15E aircraft participated in a November 2020 Crimson Warrior exercise designed to strengthen NATO interoperability.

[U.S. Air Force Photo](#)  
[via Twitter](#)

knew how to do it, and you knew how to do it right off the chute. That's the same way we should approach this counter-IADS problem, in that this should be something that we have muscle memory with and shouldn't be a one-off that we're going to have to go figure out on the first day of the world war. That's the mindset that we need to take, so when you think about our training infrastructure, where you're going to train to do this, how you're going to integrate your partners—those are pieces of this particular problem set as we think about where we're investing in terms of 5<sup>th</sup> gen and advanced bombers. They all are part of that problem set that we need to think about. Sorry, probably a little longer answer than you wanted, but I think that's an important part of reminding ourselves why we're the greatest Air Force in the world and why we're going to have partners that can be part of the plan with us.

**DEPTULA:** No, that was a great answer Cobra—really appreciate it. And what's this “former” eagle guy? You give me a cockpit, and I'll come over there right away, hop in the front seat, and don't worry I'll make you proud.

**HARRIGIAN:** I would expect nothing less from you in response.

**DEPTULA:** When you commanded the air component during Operation Inherent Resolve, you saw Russian capabilities up close and personal. What were the main observations that you took

away from this experience, and what were the biggest surprises? How did that inform your current decision-making process?

**HARRIGIAN:** So first off, I was very fortunate to have an opportunity to command down range with some great airmen—and not just great U.S. airmen but also from the coalition—then operate in a joint environment that, frankly, was a once-in-a-lifetime experience. This question, for me, drove me a bit to reflect on—probably all you out there have your little green books that you kept your notes in, and some of you are like, “Well, I probably shouldn't have written that down”—but it offered me a chance to think back at what were the key lessons learned for me. And I guess the one—somewhat related to the Russian piece, which I'll get to in a second—I think one of the key areas that you've heard me talk about was the importance of—we can use the word mission command—but really was about ensuring we empowered our airmen that were out there at the tip of the spear. My sense was because of the environment that we've been operating in for a long time, and it's nobody's fault, we were afforded the opportunity to have time to make decisions. A lot of times, that would get brought back into the air ops center, into the CAOC, where you have the AO level, the colonel level, the GO level, everybody going “okay let's talk about what we're going to do,” because we had time. Troops in contact, separate situation—but as we started getting into the dynamic environment of air-to-air, making decisions that had to be happening within an instant, it was crystal clear to me that we had over-centralized to a level that required us to step back, think about how we provided, I'll call it, the broad guidance and intent of a commander, and then let your commanders operate inside that intent. That may be surprising to some

folks, but I think it was a result of what had happened over several years of, I don't want to call it uncontested, but it wasn't the type of environment that was driving decisions that needed to happen at speed. It really wasn't at the speed that we would talk about in a pure fight, but it was clear to me we had to go back to trusting those guys and gals that were at the tip so that they understood the intent. I will tell you that, as commanders, we frankly needed to get better about how we provided intent. You yourself have written air ops directives, and you've seen these 30 and 40, 50 page hymnals that I was of the opinion, "Hey this needs to be something that they can digest like this and turn into a decision in-flight." So I think it's important that as we go forward, we remind ourselves of those lessons and continue to refine that as you think about—I'll step back to—this counter-IADS discussion while there's a place for the AOC to provide fusion, to manage resources, kind of at the theater level. At the end of the day, it was clear to me as we work through the problem set, you need to go straight from sensor to shooter as quick as possible to provide the effect that was required. That, to me, was an important lesson from not only a "professional development for our people" perspective but also for how we manage the fight. Another one that nobody ever really teaches—there's a lot of writing about it—the importance of coalition war fighting, and how do you do that, and how do you keep the coalition together. Frankly, it's one of those areas that I believe, as Americans, we do better than anybody. I'm not sure why—I think it's inculcated in our culture of being inclusive. But coalition warfighting, as you know, is not easy, and you're going to have to thread the needle in terms of how you communicate your intent and make sure everybody's got skin in the

game. What I'm reminded is that what the coalition offered me was a lot of capabilities and authorities that I didn't have inside the U.S., but they could do things. That was a huge advantage for us because they were able to deliver effects that, frankly, we couldn't do. I'm talking not just the air domain but there were other domains that they were able to contribute to in a manner that were very effective in contributing to our success. I took that to heart in terms of how I am now talking to squadron commanders, wing commanders, in terms of the importance of building relationships outside our "blue" Air Force. Some of that being in the joint world but more broadly with those that you one day could be coalition warfighting with. Those are going to be partners that are going to be critical to your success.

You can read a lot of history books and try to wrap your head around dealing with the Russians. But when you're talking to them—and it wasn't me personally, but our guys talking to them 10, 20 times a day—you get true insight into the challenges of dealing with folks who, frankly, have a different way of searching for gaps and seams in your logic to gain an advantage. It was information warfare every day with those guys. When they would say something, they were unhindered by the truth. You had to be prepared to do what you thought was appropriate. That was always an interesting challenge, and I think we learned a lot—at least I did personally—in terms of how they operated through the proxies that they had on the ground in Syria. Gen Townsend, in his role down at AFRICOM, and I have found that if you're going to compete with the Russians, you'd better be prepared to expose them and compete in the information environment because that's where you're going to find opportunities available to you. Sixteenth

Air Force has done a great job of helping us understand how to find the opportunities to expose and then highlight those malign activities that could be impacting security, particularly as it relates to the southern flank of Europe right now. Probably the last surprise, and one that I probably should have been more informed about before I took the job out there, was some of the tools that we, as an Air Force, were providing our folks that were operating in the AOC. As you're well aware, some of those tools hadn't kept up with the software development and the agility that we needed to give folks the tools that would have allowed them to have the awareness to make decisions at the speed that we needed. I think we made some good progress with what has been done in DIUx, Kessel Run, and those types of activities. There is clearly work to be done as we move to JADC2, but I think we ought to capture some of those processes in terms of understanding what the warfighter at the tip needs and have that acquisition-warfighter interface that allows us to incrementally bring in capabilities and allows us to continue to get to the longer-term vision of truly optimizing what is provided to the airmen or joint warfighter to execute the operations we have been given. I learned a lot; it was a long two years, but a great two years.

**DEPTULA:** Those are spectacular comments and observations in a short period of time. Your words are ones that the entire force—not just Air Force—needs to take into consideration. You've mentioned the issue of Joint All Domain Command and Control and you know the Chief has made that the cornerstone of his tenure. Clearly this is the sort of capability whose full potential is only going to be realized through engagement with allies and partners. How do you see our friends in Europe and Africa responding

to this vision? Are they headed in a similar direction? What are the key technological and operational factors that we need to keep in mind when building to this vision?

**HARRIGIAN:** They're very interested. They are looking to see themselves in JADC2 and how they fit in. If you start with the enabling sensors that they have—whether it be ground radars that are feeding our NATO picture, F-35s, or the human capital side of the house—they're looking to broadly understand the concept. Fundamentally what we need to do is continue to turn PowerPoint into action. I don't know if you were an A5 or an A3 guy—you were probably in the mix there—but you've had those situations where the A5 has the big idea and then they try to dump it on the A3 and say "go operationalize this." That is always the challenge. I think right now our partners see the A5, the concept. What we need to do—we're trying to work through this right now—is turn it into a CONEMP and go "alright, how do you operationalize this and how do you ultimately allow the partners to figure out where they can fit into this?" Many of them see potential niche areas where they can visualize themselves participating in it. At the end of the day, what we are going to have to do is sort out vignettes where we can generate some quick wins where they can see themselves participating. There are particular exercises we are looking at—like the integrated air and missile defense-type exercises here this fall—where we are going to bring them in. While it may be a baby step in terms of JADC2, if there are some incremental capabilities that we have sorted out—either in one of the NORTHCOM activities or any of the other ones that have been accomplished at Nellis—I'm pushing to bring them here so they can see what those are and then not only intellectually

understand it but have airmen or joint partners get a better sense of what that is. I think that will be the key area over the next two years that we've got to wrap our arms around. Gen Deptula, one of the things we got to push on hard is the security part of it.

**DEPTULA:** You're so spot on. The war stories that can be told about not even being able to allow allies to show up on the CAOC floor when you're in the middle of a major humanitarian relief effort with them are incredible—and that was 10 years ago. When are we going to fix security and get over the bureaucracy?

**HARRIGIAN:** Gen Brown will work through this when he takes over, but I know he's of the same mindset, and, naturally, you know Gen Walters is supporting me on the EUCOM side of the house. It needs to be smart risk, but I'm here to tell you we can do this. Without getting into all the classification details, there are ways to bring them in to the tent, get them what they need to know, and allow them to be key participants from planning through execution and then the debrief. That is the key. We can't just bring him in during execution and say, "We built the plan, sorry, just do what we told you." We need to understand what capabilities they bring because they are going to bring capabilities that we want. They may have access or specific capabilities that will be important to the plan and are huge contributors to JADC2 or ABMS. Like you, I want them in the game with us because that is how we are going to win. We are not going to win this by ourselves—we are going to fight as a coalition, so we have got to figure out how to do it in a smart way. I am very convinced we can do it. Here's my last point on this—and I know you wanted to get me fired up on it because you know I love getting fired up—is that you have got

to allow commanders to make smart risk decisions. There are folks who are making policy decisions, but when the forward commander makes a recommendation, we need to be informed by what that commander believes he or she needs to do to make that decision. The security environment should work as hard as they can to get the "yeses" for that commander. That's something that we have got to continually work on. It's the nature of the bureaucracy, but what I tell my folks is that I love fighting those wars for them, so let's figure out where the security challenge is and get after it. We may not always win, but we are going to do everything we can to get our partners in the game with us.

**DEPTULA:** That's great to hear and, quite frankly, this is going to be key to JADC2. We're not going to operate alone. One of the things that technology will be able to help us with is the automated transfer of levels of access to information without having to have a meeting with the policy folks. If we can get to those decisions quickly, then it can be facilitated in such a way that folks on the tip of the spear can act in a rapid time frame. Speaking of allies, let me expand the discussion a bit. Numerous allies and partners in Europe are buying the F-35. What does that do for you and what does that mean for our ability to partner and collaborate?

**HARRIGIAN:** It has been a really helpful opportunity for us to have this collaboration potential with partners that want to be arm in arm with us. You may be aware of this, but early on Gen Walters stood up our F-35 Users Group over here and then Gen Brown followed up in the Pacific. One of the areas we struggled with—and this is kind of that PowerPoint-to-action—but we'd say, "F-35 is interoperable." And you'd say, "Well, what do you mean by that? How does that apply to the operators and the maintainers

USAFE C-130J aircraft from Ramstein Air Base recently assisted the U.S. Army in conducting airborne operations with paratroopers in Italy in November, 2020.

[U.S. Army Photo](#)  
[via Twitter](#)



and those who are defining security and how do we work through that?” Here was our approach—and I share this with you because I think it was important for us that we did this with our partners—we said, “OK, let’s first talk about interoperability between coalition F-35s. How do we make sure the MBS are the same or we’re sending each other the data that can go from cockpit-to-cockpit.” The second tier we looked at was how to get F-35 data to other air domain players—4<sup>th</sup> gen, AWACS, and those kinds of things. The third tier was how to get F-35 data all domain, particularly when you start thinking about F-35 to, for instance, ATACMS and those types of capabilities. As we peel that onion back, let’s talk about tactical employment. How are we doing with TTPs? Are we actually sharing from the U.S. perspective the lessons that we’re learning in how you employ the airplane? Again, you get into some security issues that you have got to smoke out in order to say, “yes, we’re doing this the right way.” Then you get on to the logistics and maintenance side. Then you’re going to ask me how we’re doing. Well, we had to measure that. What it gave us was an opportunity to go directly

to the JPO—or whatever the organization was that was holding up progress—and find ways to measure exactly how we’re doing and then say, “Okay, we’re going to go do an exercise here and get after this particular problem set that will allow us to continue to see where we are truly interoperable.” As you do that, you’re going to uncover another area that we continue to work on, which is operational training infrastructure. How do we train together? Do we go to Italy and start setting up a 5th gen capability up there or do we go up to the Norwegians in the high north? How are we going to do that? One of my favorite questions is, “Are we going to connect our F-35 simulator so we can train together?” Those are the kinds of discussions that have facilitated a really robust conversation—not only at the AO level but at the air chief level—to go solve some of these problems. We’re not perfect—we’ve got plenty of work to do and I could deep dive with you on each one of those. But I think that structure has facilitated a more informed conversation about where we’re really at in terms of interoperability amongst F-35s. We’ve made great progress. Gen Walters would tell you the same, but



we're going to need the team here to be able to operate together, whether that means facilitating data to 4th gen capabilities or to other joint players in order to get after the mission sets that will be required to deter and defend in Europe. Lots of good progress. We've been able to have those meetings twice a year. It has been really helpful to get not only the AO level together but then to get the commanders together who can put resources against these particular areas that we want to make progress in from an interoperability perspective

**DEPTULA:** That's great to hear on the interoperability front. I'd also ask—and I think I know the answer to your question—that given all these challenges to optimize the use of the F-35, it has got to be bringing all the nations even closer together because they're operating common equipment. Do you agree with that?

**HARRIGIAN:** Yeah. You may recall—I guess it was last summer or summer of 2018—that we did some interoperability work where one of the key areas I wanted to achieve success was to have another nation that has F-35 refuel our F-35s. And we did it. We were able to do it and demonstrate it safely. Those kinds of activities, while they may sound like they're not really a big deal, it was a big deal. That is when you go back to trusting in each other. When you're flying two Norwegian F-35s with two Italian F-35s and two American F-35s, that shows why people are buying the airplane. That is combat power. That in itself—when the Russians see that you've got three nations that are employing together—is deterrence, and we ought not forget that.

**DEPTULA:** Outstanding. I've got one more question for you. Mitchell Institute recently released a report discussing the difficulty of equipping allies and partners with U.S.-manufactured UAVs due to

the provisions of the Missile Technology Control Regime because it characterizes these uninhabited aircraft in the same class as nuclear weapons delivery vehicles. Could you speak to how you see demand from partner nations to gain access to U.S. UAVs and the need for the U.S. to meet it?

**HARRIGIAN:** That's a great question. As you're well aware, I've had many an air chief talk to me about what it's going to take for them to gain their own MQ-9s or some other UAS-type capability. Not to sound flippant about this, but here is what I saw happen: If we didn't sell it to him, then the Chinese sold it to him, or we had to try to talk him out of buying another one because they'd look at us and say, "Well, you won't sell it to us." I think we've got to be thoughtful about how we work our way through the intricacies of the policies associated with this. I think a lot of people look at an MQ-9 and say, "That's going to be counter-terrorism." Well, not anymore. If you're thoughtful about how you employ these things and where you're going to operate and how you're going to use it from an indications and warnings perspective—or from a deterrence perspective, because they know you're there and looking—I am wholeheartedly in favor of our friends across Europe having a capability that allows us to do more of that given that we're going to be sharing that information and it all contributes to the I&W. We—the collective "we"—need to have the necessary SA on potential adversary activities. You can also make the argument about what that means in Africa as well, given what both China and Russia are doing in Africa. All you've got to do is go look at a map—you can probably go to Google and look at all the locations there and what they're trying to procure or what they're doing from an infrastructure perspective—and getting data, intel, and pictures that allow us to expose those types

of activities are things that we need to be cognizant of. The Russians know when we have satellites coming overhead—I can give you a bazillion examples of that. We have got to be creative in the ways that allow us to have resilient opportunities to collect. Affording our partners these capabilities—our valued partners who make a sound argument for having these capabilities and that we trust to leverage them in the appropriate fashion—is something that I believe we need to take a hard look at and give consideration to.

**DEPTULA:** Excellent. We've come to the end of our discussion. Thanks, Cobra for your superb insights. They really were excellent and informative. 🌟

## About The Mitchell Institute

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