AA Ep. 188 – Front Line Air Mobility Revolution: 317th Airlift Wing - Transcript

Heather "Lucky" Penney: [00:00:00] Welcome to the Aerospace Advantage Podcast brought to you by PenFed. I'm your host, Heather "Lucky" Penney. Here on the Aerospace Advantage, we speak with leaders in the DoD, industry, and other subject matter experts to explore the intersection of strategy, operational concepts, technology, and policy when it comes to air and space power.

So, if you like learning about aerospace power, you're in the right place. To our regular listeners, welcome back. And if it's your first time here, thank you so much for joining us. As a reminder, if you like what you're hearing today, do us a favor and follow our show. Please give us a "like" and leave a comment so that we can keep charting the trajectories that matter the most to you.

Air mobility. It's one of the most essential capabilities required to sustain modern combat operations. It doesn't matter how capable our fighters and bombers may be, or the sophistication of a forward deployed space downlink center, if the men and the women who execute these missions lack the necessary material and supplies to do their job.

This means everything from munitions, to key parts, [00:01:00] to food, and medical supplies. That demands robust air mobility capability and capacity. We learned a lot about that back in March when we hosted Air Mobility Commander General Mike Minahan, and we'll leave that in our show notes. This week, we're going to dig deeper by chatting with Colonel Tom Lankford, the Commander of the 317th Airlift Wing at Dyess Air Force Base in Texas.

Colonel Lankford and his team operate C 130Js, flying all over the globe to sustain key missions anytime, anywhere. And, as General Minahan explained, how we think about the air mobility mission is changing fast. For the past 30 years, we largely focused on supporting a limited number of regions that were relatively benign from an air power perspective.

And that saw us focus on efficiency more than combat resiliency. With the rise of peer competition, thanks to China, we can't assume things will ever be like that again. Our forces are going to come under attack, which is going to drive major challenges from a mobility perspective. They're going the distance in the Pacific.

Concepts like Agile Combat Employment are really going to [00:02:00] upset the standard mobility paradigm. And the need to rapid resupply is also spiking, because it takes a ton to sustain a major theater campaign. And, all the while, missions in the homeland, in Europe, the Middle East, and everywhere else, they haven't stopped.

In fact, the demand for air mobility is surging. So, today we're focusing on all these changing variables so we can learn what it means from a flight line perspective. Talking to senior leadership is awesome, but if you really want to know what's going on in the Air Force, the wing is the heart of everything.

And that's why we're so happy to have Colonel Tom Langford joining us today. Sir, welcome to the podcast.

Colonel Lankford: Thanks Lucky, and it's an honor to be on with you today.

Heather "Lucky" Penney: Fantastic. So before we jump into the conversation, I frame the issue as I see it. What's your take regarding the challenges that air mobility faces today?

Colonel Lankford: Yeah, I think I'd like to sum it up in three words, accessibility, communications, and fuel. The threat picture in most theaters nowadays can be a lot more [00:03:00] prohibitive than it was, you know, certainly after 9/11 or during Southern and Northern Watch. And our assets that can suppress those threat systems are going to be stretched stand in any, contingency.

And our base lay down is well known. So how do we defend that? So, between the sheer volume of communications and a conflict. A lack of communications equipment, potential jamming. Comms are gonna be harder than they've ever been before. Further fuel is gonna be a hot commodity.

Heather "Lucky" Penney: Yeah.

Colonel Lankford: So where's that fuel gonna come from?

How do we protect it? How do we prioritize who gets it and when? And the bottom line is we've grown addicted to the mega bases from Gulf War 1 all the way through Afghanistan and Iraq. And we simply can't rely on those bases in the future and all the structure they provide, the accessibility they provided, the communications they ensured and the, fuel and logistics that we've grown to

depend on those. Those aren't going to be there in the future. So that's. the things we worry about.

Heather "Lucky" Penney: I really like how you broke that down into three pieces, right? Access, communication, fuel. [00:04:00] So accessibility to the base, we've got accesses to the base communication, which includes battle space awareness or situational awareness and clearly fuel, lots of it because we're at this big mega base.

We can operate very efficiently. This is what shaped our experiences for the last 30 years, your career and my career. Can you go more deeply into how that has then influenced today's mobility forces?

Colonel Lankford: Yeah, that's a great question. When I, came in and 97 finished pilot training in 99, I think similar to your time frame.

And we were neck deep and Southern watch Northern watch. The aftermath of Allied Force, you know, running missions from C 130s out of Rammstein into the Balkans and Southeastern Europe in the aftermath of those. And then I deployed prior to 9/11 to Sea Bear Basin, Muscat, Oman, as part of Southern Watch.

And as you'll recall, there were, you know, a few big bases. There were a couple in Kuwait. There was Prince Sultan and, and Saudi Arabia. Al Udeid didn't exist yet.

Heather "Lucky" Penney: Yeah. Yeah.

Colonel Lankford: They were [00:05:00] starting to build that, so we were in Doha and, Muscat and, out in Thumbrait, in Oman. And so we move trash around the theater, we move, goods and supplies, you know, as part of Northern and Southern watch and then in Europe. And we were on regular rotations. The missions weren't all that stressful. There wasn't a lot of combat going on, certainly in the Middle East at that time for mobility aircraft. And so that's what we got used to. And then, you know, 9/11 happened.

And completely changed everything as you know. So, all the bases built up. A bunch of new bases start popping up all over the place. To include in the "Stans," as we call them, Kurdistan, Uzbekistan Tajikistan, places like that. We opened up more bases in the Middle East to support all those things.

And it completely changed everything. It became a massive tanker and airlift effort. And the kind of sleepy hollow that was the Middle East for mobility aircraft anyway, changed overnight.

Heather "Lucky" Penney: So what were the major challenges that kept you and your folks awake [00:06:00] during that era? So let's say post 9 11, the last 20 years, clearly there was a high demand signal, but the kind of operations that we were doing in the Middle East are very different from what we'll need to do in the future.

So what were you really thinking about back then?

Colonel Lankford: Initially, it was a threat. We were, I think we had probably somewhat overhyped the threat. We were really worried about Stingers and Russian MANPADs left over in Afghanistan, initially. A lot of AAA pieces we were worried about. And honestly, we weren't trained to do a lot of the things that we were then asked to do at places like Rhino.

Net- night vision goggles in the C130 slick community were somewhat of a forethought. It was a training item that we had to do, but I think we paid a lot of lip service to it. And no one really worried about it all that much. And then suddenly, you know, my squadron at the time, the 39th Airlift Squadron was flying out of Uzbekistan, landing in Rhino and other places that weren't well lit and having to taxi in some blacked out environments.

[00:07:00] And we simply weren't trained to do that. So that was something that we had to worry about quite a bit. And, you know, there were some minor mishaps with that. There were some larger mishaps with crews flying in the mountains without NVGs or folks just kind of pushing things probably a little farther than they needed to. And that led to some mishaps.

There were a lot of deconfliction problems. So you had joint and coalition aircraft over what is a relatively small space in Afghanistan. Most of the bases were kind of along the east coast of the country at that point, east coast, east side of the country at that point, and they were competing fuel and cargo priorities.

We worried a lot about slot times because the MOG the "max on ground" was low at a lot of these places. Bagram for instance, was, was tiny. I mean, there, you can only fit two to three aircraft on the ramp as it stood back in 2001, 2002 through later on. So there's a lot of deconfliction issues there.

And then Iraq kicked off and we got to go do it all again. And so we kind of, in a lot of ways, [00:08:00] relearn the lessons we had learned in Afghanistan, but our training was better. We had brought along NVG training at that point. And we were better at understanding how to set up airspace for joint and coalition issues and priorities.

And I think we were a little better at making sure crews were ready to go with all the things they might face. When they got there, and that kind of stayed steady state, as far as that went. You know, in Afghanistan and Iraq until later in the 2000s, when we really became airdrop heavy. Because there were convoys on the road, as we all remember, and our vehicles weren't exactly up to what they needed to be at the time famously to protect our folks. Folks were welding additional stuff onto their Humvees and other vehicles to protect against IEDs and force penetrators and things like that.

Our goal became very focused on getting convoys off the road. So by that time, around 2010, I was a Major working at Air Mobility Command, and we [00:09:00] really rapidly improved our airdrop capability. That became a huge focus to airdrop equipment into the forward operating bases, the FOBs and the combat outpost, the COPs in order to get those convoys off the road.

So, between 2010 and 11, we dropped between 140 and 160 million pounds of supplies into the Middle East, which was more than we have ever dropped in combat combined. From World War II, Korea, Vietnam. It was a pretty huge record. And that was just that, that 140 to 160 million was just gray tail air mobility, command aircraft.

There were other agencies and certainly AFSOC dropping as well. And we were able to rapidly, it was really a lot of fun, for once being at the headquarters because we were General Johns was the AMC Commander and we had a lot of room to maneuver as far as developing things like joint precision air drop system. Where we can drop from several miles off with a steerable GPS driven bundle. [00:10:00] Low cost, low altitude, air drops and extracted container delivery system where we came in really low and we're able to drop right into a FOB or a COP. And we got really good at that. And that kept the army and Marines and whoever else was on the ground from sending a company plus size element out to secure a drop zone and we got them fuel, food, water. Everything we needed directly into those COPs and FOBs and we took a lot of pride in getting those convoys off the road because I feel like we saved a lot of lives

Heather "Lucky" Penney: No, that's incredible. Especially with how rapidly you were able to respond with changing the techniques and procedures as well as the technologies, right? To be able to do that.

So, I'd like to talk more about that later when we bring up the Pacific and Agile Combat Employment. But one of the things you did as well was you brought on a new model, the C 130, the C 130J, during that timeframe. And the J was a significant advancement, um, over the C 130H model.

And so I'm curious if you would be able to describe for our audience how the J was different from the H and how it's performance [00:11:00] attributes brought new opportunities for you to the force and how, what the operational impact of that was?

Colonel Lankford: Yeah, it was a leap forward in technology.

So the C-130J-30, which is the stretch Super Hercules, it has 15 more feet of cargo space in the back. It has significantly more powerful engines, much better avionics. It removed the flight engineer and the navigator. And I think it was 2005, I was sitting in Baghdad in an E model. So we were still at that time flying C 130 E models built in 1963. C 130H, H1, H2 H3s, which had better engines, better air conditioning, some better avionics, but we're still, you know, 1970s technology really.

And I was sitting in Baghdad and I took off and a C 130J from Baltimore Air National Guard took off after me. I don't know if you remember, but the point to get in and out of Iraq from Kuwait was called Point Tamim. And that was a big reporting point, you know, and it was always good to hit that point and get out of Iraq. [00:12:00] And that J model took off after us and beat us there by about 40 minutes.

And I remember the whole crew was groaning and angry, but uh... (Laughter). You know, we like to complain. I was really impressed with the speed and altitude because they were several thousand feet above us as well. So, with a J, you know, just think bigger, better, faster, more. It carries a lot more cargo, carries more paratroopers, and it can get places a lot faster while maintaining that capability. That short field capability that we enjoy and it's just a lot faster. And, you know, my strategic airlift brothers and sisters will laugh at the relative speed difference, but to us, it's a really big deal. And we can do a lot more with the J than we could ever do with the E and H, which were heroic aircraft and fantastic, but just not comparable to the J from a capability standpoint.

Heather "Lucky" Penney: Well, from a speed perspective, I'm curious about the fuel burn, right? Because if it takes you less time to get somewhere, if you have a fairly comparable fuel burn, that means you're being more efficient with that limited resource, right? So that could make a big difference in the Pacific.

Colonel Lankford: Yeah, that's absolutely right. The fuel burn on [00:13:00] those aircraft isn't a whole lot different because the engines are a lot more efficient. And there's a lot less drag with the six bladed prop as opposed to the old four bladed flat propeller that, it was kind of like barn doors out there.

So, yeah it's definitely gives an advantage in that aspect.

Heather "Lucky" Penney: And the other piece about the speed is it allows you to be able to get places more quickly, which increases your overall throughput, right? Because the faster you can get somewhere, then, you create more opportunities to get to other bases on the backside. So, I think there's a lot to be said for that speed, that altitude, that performance.

Colonel Lankford: Yeah, no question. And it's got some other capabilities that make re-rigging and flight a lot more, a lot faster. I mean, incredibly faster. So, when we get on the ground, we're ready to change from loading up personnel to equipment and vice versa, which used to take a lot more time.

So not just in speed of the aircraft itself, but in speed of configurations, it can make a huge difference on the ground.

Heather "Lucky" Penney: Oh, that's yeah, that's fantastic. I mean, so it's really not just about, you know, going to [00:14:00] a "sexier" aircraft. There are very real operational implications of that enhanced performance.

So when did you get a sense that things were changing from what we had been doing and CENTCOM? You know, in DC it was the 2018 National Defense Strategy that sort of stands is that defining marker that pointed a greater focus on the challenges being posed by China and the idea that things are going to look a lot different than Iraq and Afghanistan.

So, when did you and your folks in your community air mobility begin to sense that things were changing?

Colonel Lankford: Yeah, so the National Defense Strategy in 2018 came out when I was a student in National War College. Go Warriors. What struck me is,

you know, Secretary Mattis had published that and it was 14 pages. But 40 different times in those 14 pages that mentioned the word compete.

And I remember talking about this a lot with my fellow students and the professors and National War College about just a succinct nature of this national defense strategy and the change in language. I never seen the [00:15:00] word "compete" used that much or even at all in previous national defense strategies.

And this, if you'll recall was after the Asia pivot of the previous administration, and this was the first one that really talked a lot about China, specifically and competing against them. And, you know, the Asia pivot from our perspective at the time had not really happened. We had talked about it, but we were still, you know...

Heather "Lucky" Penney: Fully committed to the Middle East.

Colonel Lankford: Yeah, we were, you know, we're mostly committed to the Middle East. So that was the, that was what we kind of felt was the first, "okay we talked about Asia and now we're writing about it and making a policy." So, 6 years on from that national defense strategy, I think we are finally taking it seriously because I see a lot more involvement from a mobility perspective in getting serious about pushing our way into exercises out in the Pacific. For instance, I think we're going to talk about this a little later, but my ops group commander Colonel Justin Deal, just came from PACOM Staff and [00:16:00] he, bulldogged us into Balikatan this year and in Lujan 4, I believe is the name of that exercise. Which was a Marine exercise concurrently going on the Philippines. And then last year, General Minahan's brainchild of Mobility Guardian 23. We have, we are literally flooding the zone with mobility aircraft when we did that.

And that did a couple of things. Number 1, it familiarizes our crews with the theater. They're all really good in the Middle East, but over water nav and, the planning considerations that go into islands, going into and departing islands, the weather in the Pacific, just a sheer size.

Heather "Lucky" Penney: Yeah.

Colonel Lankford: It allows us to start thinking about planning for an executing in that theater and planning for the inherent challenges as well as the players, both joint and coalition, you know. The Pacific is a big Navy theater because there's a lot of water, but there's a lot of joint and coalition partners out there as well.

The Philippines, the Japanese, the Koreans where I, you know, I spent a couple of years of my life. And getting out there and getting to know them, getting to know their cultures, their capabilities, [00:17:00] their view. They're going to get a vote too in any coalition warfare or anything like that. So getting to understand those things is priceless.

And secondly, it lets everyone, friend and foe alike, know that we're serious about the Pacific. We're here to stay. We're no longer paying at lip service. We're not just saying we're going to pivot. We're pivoting. We're moving things there. We're leaving them there. We're leaving aircraft there.

We're, joining into more and more exercises. And when you have a four star general, you know, with the powerful voice of General Minahan constantly talking about it and making sure that our assets are out there, people take notice. And it's important for our coalition allies to realize that we're not going anywhere. We're here and we're here to stay.

Heather "Lucky" Penney: Operating the Pacific with that pivot is going to be a very different ballgame than what we've been doing for the past 30 years. I mean, CENTCOM AOR is largely a regional exercise, but when you look at the Pacific, that is half of the globe.

That's a lot of water, vast distances, and little tiny islands. So what does that mean when it comes [00:18:00] to how we need to operate as a mobility air fleet? What are the challenges and considerations that need to be taken in there?

Colonel Lankford: Yeah, I can sum that up in three words. Fuel, fuel, fuel. Because... (laughter).

Heather "Lucky" Penney: How about some, add some nav in there, right?

Colonel Lankford: What's that?

Heather "Lucky" Penney: Add some navigation in there, right?

Colonel Lankford: Yeah, absolutely. And, you know, and that's part of it as well. When you're planning for routes of flight, there's air traffic control and things like that, that they can throw wrenches in the plans, which happened to us recently.

And I'll get into that a little later, but I worry so much about fuel in the Pacific. And I told, you know, General Minihan that and many others at rally last year

when we talked about things that keep us up at night. Where are we going to store it? Where are we going to protect it?

How are we going to prioritize it? Because if, you don't have the gas to get there, you're going to turn into a float plane really quickly, which is not good for anybody. And, you know, it's just, it's massive planning considerations that you don't have to worry about literally anywhere else. I think PACOM is responsible for something like 52 percent of the globe.

And like you [00:19:00] mentioned, so much of that is water. So, fuel is what keeps me up at night as well as folks SAF IEN at the Pentagon, they worry about fuel efficiency and they're constantly coming up with ways to make our aircraft more fuel efficient, and every time they have something, I raise my hand, like, with the external tanks and say, "hey, give me some of that" because I want to save as much gas as we can. So that's the big consideration, is the fuel.

Heather "Lucky" Penney: Yeah, absolutely. I mean, nothing's more useless to an aviator than fuel that you don't have, right?

Colonel Lankford: That's a fact.

Heather "Lucky" Penney: And that efficiency, fuel efficiency, translates into time, translates into range, and translates into options. So absolutely. What about the threat? Let's talk about that. Not only are aircraft and your crews at risk in the sky, and there's some inherent operational risks that you just described, but air bases are certainly going to be targeted in a conflict.

And that drives major planning factors regarding survivability and resilience, and General Minhan has spoken to this as well. There's attrition and loss elements that we need to consider. So, can you [00:20:00] help our audience understand this potential future and what it means for airmen in your unit flying the line?

Colonel Lankford: Yeah, that's a great question. So, like I said earlier, we become addicted to the megabases. And, but megabases are megatargets. It's not like they move. They're not stealthy. They're not unpredictable. So it really makes the targeting problem for our adversaries a lot easier. And we can't put loads of missile defense at every single base that we want to operate out of because, you know, that asset is going to be stretched thin.

So, the question we asked ourselves early on in my command here at Dyess was, you know, how do we survive that? How do we learn to distribute our

forces and disperse? How do we learn to move quickly? And so, you know, we talked about three things, communication, speed, and landing options. So we have to get that threat warning.

So that's part of communications. How do we set ourselves up in a potential environment with jamming or just distance or old equipment and things of that nature to [00:21:00] find out that there's even a threat inbound. Secondly, we have to quickly depart the fix and that's the speed. And then we need options on where to go up the runways damaged. Where can we go?

What places are there going to be available if we just took off out of somewhere and the runway gets nailed? So we had some inbound bad weather about a year ago, a little over a year ago. And so we decided we had to get all our aircraft out of Dyess to avoid, you know, potential tornadoes and things like that.

So I looked at my ops group commander at the time, Rowdy Poole, who's the wing commander at Scott (AFB) now, and I said, "hey, let's turn this into a flush exercise." So we put a bunch of crews in crew rest. They showed up, we alerted them, they showed up, we said, "hey, missiles inbound, you have an hour to take off, max."

And so, our average cruise got out in about 40 minutes. And it was cool, I mean, the whole ramp emptied within about an hour, we had a couple of tails with some maintenance issues, but it was about an hour and 6 minutes. We went from a ramp full of C 130s to none, and it was cool, but it was not fast enough.

So, we got with [00:22:00] some of our brain trust here, some of our weapons officers, and then one of our cross flow guys who used to fly KC 135s. And I said "hey, 29 minutes was the fastest crew that got off the ground. That's not good enough. What is the fastest we could get a C 130 from blacked out, no power, to in the air. Come back and let me know."

And so they talked to some KC 135 crews. They talked to B 52 folks who have really, both those communities have really good rapid start, taxi, takeoff procedures. We morph those, our folks morph those, into a C 130J specific checklist. And we can now go from sitting inside the squadron, with an airplane that is completely blacked out. No power on it to airborne and way less than 10 minutes. So, we came up with that rapid start, taxi, takeoff procedures and just created it. And so that takes care of one problem, because, you know, with a lot of these bases, you're going to have hopefully about that amount of time to run out and get a plane cranked and take off, but that plane takes off.

I can't guarantee how much [00:23:00] fuels in it, and we can't guarantee where it's going to go land. So, we started talking about how to plan for alternate landing surfaces, and one of the beauties, one of the many beautiful things about the C 130 is we're not that heavy, so we can land on a road. We can land on a dry lake bed.

We can land on sand on a beach in a lot of cases. There's great videos online of that. So what are the planning factors to go into that? What things do we need to bring? So, we started talking about all that and do we need to bring something as simple as chainsaws? And so we can then identify roads near that base that might be a contingency landing zone. Fields, you know, grass fields, dry lake beds, things like that.

Have those places identified and prepped. And so we've worked with the state of Texas to try to set up a landing on a road south of us a little bit. We haven't gotten that over the line yet, but the, you know, "the plan is nothing planning is everything." So, the planning factors that have gone into that have taught us a ton on how we prep an island or [00:24:00] another location, we might be out of the Pacific, for that contingency.

So we know we can get off the ground quickly. We now know what we need to rapidly set up a contingency strip on a road or someplace like that. So those are things. That we've learned from just looking at this theater.

Heather "Lucky" Penney: That's incredible. I mean, you're thinking about the factors and the requirements for alternate landing locations and you're not talking about like an alternate patch of concrete, that's a legit runway. You're talking about getting your pilots bush pilot qualifications.

Colonel Lankford: Yeah, exactly! So, in Gulf War 1, the whole left hook, you know, Schwarzkopf's left hook was supplied out of a road landing zone they built called Log Base Charlie. And it's an incredible story. I think we were landing a C 130 on that, on those roads every couple of minutes for a couple or three weeks.

And we provided the logistics. forces for that maneuver by landing on that road, because no one expect us to be able to do that. So there are lessons in the past where we've done this [00:25:00] before, and we just needed to dust those things off and get smart on them again, which we have.

As for attrition, you know, we don't turn out hundreds of aircraft like we used to. My grandfathers were both bomber guys in World War II and flying B 26s

and B 24s, and we were turning out airplanes every few minutes. We just don't do that anymore. And so we have to really treat those aircraft as precious assets that they are, which goes in a lot of the things I already talked about to protect those aircraft.

But as far as attrition of personnel, that's a concern. I mean, we're not going to have the high end medical facilities. You know, the hospital at Bagram was fantastic. They did a lot of life saving work there at Bagram and I know the same in many of our bases in Iraq. We may not have the time or the ability to set those up as we have in the past. So, we've actually worked with the bomb wings med group here on a concept called Star Doc. Which is kind of next generation command and control for medical contingencies, for combat contingencies.

And we took them with us on our recent trip to [00:26:00] Guam, and they were able to set that up pretty quickly. And I'm excited about the possibilities of that, but the bottom line is we talked about multi, we talk about multi capable airmen all the time. And so our airmen have to be really good at what we now call TCCC (T Triple C), which is our combat care, self aid buddy.

You know, we used to call self aid buddy care and things like that, we have to train that to a high level, to where everyone is able to perform those life saving medical techniques in lieu of a doctor or in lieu of medics. And that has to be a constant training program to keep that going, because we're not going to have those things available, because we're not going to have the mega bases we talked about before.

So it's something we talk about and plan to all those things. We exercise it and we think about it and we work on and try to make those better all the time.

Heather "Lucky" Penney: Absolutely. I mean, you're, by doing this kind of dispersal, it's going to really change the way that you operate, change the demands for skill sets that the airmen will have, as well as everything you need to feed, fix, and keep things moving.

But it also really [00:27:00] puts a different pressure, a new spin, on the paradigm for command and control. And you alluded to this when you talk about communications. Things become pretty centralized over the past several decades. And again, you talk about these mega bases and from a fighter perspective, it really is going back to asking "mother, may I..." anytime you want to do something with the jet. We become so reliant on these current comm methods it might not be you know, viable in a contested environment. So how

are you thinking about doing the command and control for logistics? Cause that's crucial. Especially as things become more complicated through these dispersed and ACE operations.

Colonel Lankford: Yeah, that's a great question as well. And it is going to complicate things for us.

But it's another thing we have to think about, train, and plan to. But it's also going to complicate things for adversaries as well, because it's forcing us, by their ability to jam us, their ability to disrupt our communications, is going to force us to do a lot of different things that they aren't expecting.

And to prepare for that we built something here we call "Tactical Operations Center in a [00:28:00] Box" or "TOC in a Box." And we started setting that up just after I got here. We had some of the components when I got here. My predecessor did a great job of thinking ahead on a lot of these things, but we've, taken it further.

So we can take set of things that we need to communicate. It takes less than a pallet position. And we can land somewhere and be up on global secure comms in about five minutes. At first, it took about 17 minutes. We've got it down to about five and we've exercised this. So we took it to Southern Star last year in Chile.

That was the first kind of operational test of it. We learned a lot out there about operating it, in a much less sterile environment, another country. We took it with us we went deployed for Spartan Shield after October 7th. And we're up on comms immediately upon arrival. We take it to every major exercise now.

I'm buying more and more of them because, you know, the crews can't get enough of it. Because they land and we are up online within minutes. [00:29:00] And we can, A)... so, let's say we have to go do a rapid start taxi takeoff from an island we're on. Disperse to another island where our command and control was expecting us to be within 5 minutes. We're online communicating, "hey, we're here. Here's our fuel status. Here's our maintenance status. Here's how many personnel we have. Where do you want us to go next?" And, you know, in lieu of hearing that we're going to conduct follow on missions as well, based on what we understand to be commanders intent.

So, we have exercised this a lot. We demonstrated a lot where we're kind of passing the lessons learned to the other units through our weapon system council and some other units are creating their own versions of this. But I'm

really happy with where we are in development of that and the capability it gives us to communicate because, you know, they're sitting back in an AOC an Air Operations Center somewhere and we just got a, you know, an attack on a base.

It would have been days previously before they found out, you know, potentially days before [00:30:00] they found out where those aircraft were. And now they're going to know as soon as we land, what help we need, what our status is, where we're at and where we can go next to continue delivering effects.

Heather "Lucky" Penney: That's phenomenal. And the fact that you're exercising this, you're using this in operations. I mean, you've clearly got to get a lot of lessons learned out of real world employment of this new capability. So can you share with us some of your biggest surprises, those lessons learned? You've mentioned you're sharing those lessons across your community. How is that also changing the way that you're approaching command? I mean, you're still plugged into the AOC, but you mentioned that there's a lot going on regarding how you're executing commander's intent.

Colonel Lankford: Yeah. So, we really have to be very clear with our crews and our maintainers when they go out on a mission. Here is the goal of this mission. Here is the intent. Here's what we expect and then go hands off. Because they're going to be in situations where they may not have that command and control and they're going to need to continue to [00:31:00] execute. So it's forced me and I've always been pretty hands off anyway maybe to a fault. But I really believe that I give the overall vision and then they give, they have the better ideas about how to go execute that vision. So it's my job to provide that training. Put them in positions where they can test those things out. We take the lessons learned and then go get better at it.

I was listening to a podcast a few months ago and Tim Kennedy, the former MMA star and he's a Green Beret. He talked about, "you don't rise to the occasion in a contingency, you fall to the level of your training." And that was like a massive light bulb for me.

And so I repeat that sorry, Tim, I steal from you a lot here, but I tell my folks that all the time. So it's my job to create training environments. Where the level of training they fall to is enough to win. And there's a lot of trial and error with that. There's a lot of trust in that.

I have to trust them to go out and execute and they have to trust me that I have their back when they make mistakes. And, you know, mistakes are awesome because they're a [00:32:00] great way to go learn lessons. And so we go out and in the process of learning rapid, start, taxi, take off of learning how to use TOC in a Box, of learning how to flush and disperse and all these things. Yeah, we've made, we've definitely made mistakes, but I have their back and making sure that those mistakes are treated as lessons learned and not something to be ashamed of or upset about. And it's just, you know, what you're talking about is forced me to push a lot more trust down to much lower levels and trust that the training we provided them is good enough for them to go and win.

Heather "Lucky" Penney: Absolutely.

So, I really think it's phenomenal that you're providing this learning laboratory, if you will, to your airmen so that they can really get to that next step. As you said, get to the level of training that will allow them to be successful in that contested environment, the Pacific. But we still have to meet the mission demands in the US, here, in Europe, the Middle East ain't going to go anywhere, Africa, South America. I mean, demand for global mobility is not going to go down and it's not going to be to [00:33:00] only the Pacific.

Can you walk us through what it's going to be like to balance all of those mission demands?

Colonel Lankford: Yeah, so the way we view the threat in the Pacific is that's the highest threat level we will Encounter, as far as we know. So if we can train to, defeating that threat, we will be fine everywhere else. If we can execute in that theater, with all the planning problems we've talked about, we can operate in Europe. If needed. We can operate the Middle East. We know we can operate Middle East. We do that every day. So, one thing I was concerned with, as far as that goes is, the preponderance of C, 1 30 aircraft actually belong to the Guard and Reserve. Like many other airframes and so I'm the Weapon System Council Chair this year. So the Weapon System Council is the C 1 30 council where all the wing commanders get together and talk about things. So, I'm the Chair for this year and one thing I talked about is accelerated mission sets this year and how I wanted [00:34:00] everyone on the same page.

Because, you know, as you, most of our listeners will know,Guard and Reserve units aren't manned full time like an active duty unit is. So they don't have the assets often and personnel who are there every day to practice the accelerated mission sets, such as AMP4, aircraft marking pattern for landings, which is an NVG landing to a completely blacked out surface. Special fueling operations

and forward air refueling points where we've worked on quite a bit. Where we can put gas and oblivit. We can put gas and special operations aircraft at Dyess last year, we put gas directly into running Abrams tanks and Bradley fighting vehicles as well as HEMTT trucks.

They are logistics trucks they use for fuel. So we can deliver fuel right to the front lines as needed. So things like that with special fueling Combat Offload Method C, which is a way we can taxi along and rapidly, without stopping, when we need to get out of someplace quickly, we can rapidly download cargo and then finally, the rapid, start [00:35:00] taxi, takeoff procedures we talked about earlier. Those four things are what I call the accelerated mission sets.

And so to be successful, potentially in Europe if the Ukraine situation were to escalate. Or in the Middle East, if that continues to escalate. Or in the Pacific, we can't have a Combatant Commander looking at a wing of C 130s and while these four sets of tails and crews can do all these things, but these four cannot. So, what I asked the Guard and Reserve to do was to up their level of training for just their full timers, so that when they initially depart on a contingency. We present forces to a Combatant Commander that are the same. Again, the combat commander should never ask the question "what are the capabilities of these two different C, 1 30 wings?"

So, they stepped up big time. Our Guard and Reserve partners have really shown their desire and professionalism to make this a reality. And they stepped up big time on all these. And we will be able to, in a contingency in the initial stages, go as a total force.

And execute these [00:36:00] accelerate missions, sets that are war winning tactics for Europe, the Middle East, Africa, Pacific, South America, wherever we need to go. So, it's just a matter of training to the highest threat. And if you can train to that highest threat, you can handle any other theater.

Heather "Lucky" Penney: And you're calling these accelerated mission sets because of the urgency with which airmen need to achieve proficiency and expertise in their execution, right?

Colonel Lankford: They're accelerated mission sets and they, yes have been accelerated as far as how quickly we've gotten them on the books and ready to train to them.

As well as just accelerating our overall capabilities and things we can do.

Heather "Lucky" Penney: So, why wouldn't, these missions be part of the doc statement and part of the Ready Your Crew program that everyone simply trains to?

Colonel Lankford: That's our goal. That's our goal is to get them to that point. But with anything that's new, you have to test it out.

You have to try it out. You have to build the TTPs. Build the training guides. So for instance with AMP4 landings the Aircraft Marking Pattern For the [00:37:00] blacked out NVG landings. We built a training syllabus. Sent it to Air Mobility Command who very quickly to their credit, turned it around and said, "okay, I got a call on Tuesday from the Deputy A3 said, you're clear to go do this."

And Thursday night, we had a crew in the air operating here locally, you know, with some local procedures we'd set up for that. So, it's with all these things you can't just jump right into them. You have to prove they're safe. You have to prove their viable. You have to prove that everyone across the board can go.

Heather "Lucky" Penney: Yeah, and then develop the qualified instructor pilots on the syllabus to be able to then teach this. So this is, you're really developing advanced tactics and developing the C corn and expertise within your wing that you can then distribute both, not just the across the active duty, the guard and the reserve. And so bring everybody up to this level of performance, it'll be necessary to win within the Pacific. As well as, you know, what we're sort of presenting is lesser use cases, but frankly, around the globe for Combatant Commanders.

Colonel Lankford: Yeah, that's right. And that's the goal. And, you know, every wing takes on a few [00:38:00] different things.

Our brothers and sisters at Little Rock Air Force Base have taken on some other combat initiatives. And as a community, I'm really happy with where we are heading. And where, how far we've come with those accelerated mission sets and making our ourselves as effective and survivable as possible.

Heather "Lucky" Penney: Awesome.

You know, when I was asking about the Pacific versus the rest of the globe, um, it wasn't just about those lesser use cases. It was also really about capacity, right? I mean, everybody wants some, you know, more mobility, more fighters,

more everything. And if anything, looking at, the demand to execute the noncombatant evacuation, the NEO out of Kabul.

Where we had to activate the CRAF, the civilian reserve air fleet, that just tells me that we need more. So, what about allied partnership and integration? We're very fortunate that a lot of our partners also have air mobility assets, and many of them are equipped with the C 130J as well. So, how can we work to ensure that we're engaging more seamlessly with these allies and partners?

Colonel Lankford: Yeah, [00:39:00] so that's a great question. And while I'm extremely happy that a lot of our coalition partners have the C 130J, we've got to work with everyone. And starting to do things with the French, for instance, their wing commander reached out to me and wants to have a sister wing set up where we train together. We share ideas and, you know, that'll go up to Pentagon to get approved. So that is something that, that is invaluable.

And when I was a Lieutenant and a Captain here at Dyess, we had a similar setup with 70 squadron Royal Air Force. We exercise with them every year. And, you know, you want to talk about a small, but mighty air force, the RAF C 130, you know, crews at the time were incredibly professional, incredibly skilled, and we learned a ton from flying with them.

So the more we do that, the better. And I'm a SAFIA alum, International Affairs Office at the Air Force. I worked for the mighty and famous Heidi Grant. When I was there and, one thing that she was amazing at and that SAFIA still amazing at, is going out and building those partnerships. You know, when we, when we sell C [00:40:00] 130Js to the French or the Germans or F 16s to whoever around the world. We tout it as we're not just selling you equipment and capability, we're selling you a partnership and a friendship and we're selling you training going forward and relationships going forward.

And, you know, those relationships, as has been proved time and time again in conflicts, you know, since World War 1 are invaluable for increasing our capabilities and bringing force to bear in a contingency and more importantly for deterrence.

When our adversaries understand that we are a united front. With our coalition partners who have the same equipment, who are just as capable, you would hope that acts as a pretty strong deterrent to keep folks in line and To help any potential conflicts simmer down before they start.

Heather "Lucky" Penney: I love what you said about deterrence and how having those strong partnerships and the way that we're using our relationships, whether or not this is their technologies, the training and so forth to strengthen that kind of deterrence. [00:41:00] I'd like to pivot a little bit and talk about what you did prior to the 317th when you were the ops group commander at the 314th, which for folks out in the audience is a C 130J schoolhouse at Little Rock, Arkansas.

Can you talk to us about what it's like for our young pilots that are entering the force today? You know, for those of us who went through pilot training back in the dinosaur era, studs today now receive their wings after six months in the T6. So the students you received came straight from that basic training.

So how did that impact your syllabus for the C 130J and what you needed to do to get those young pilots ready for their first operational assignment? What's the same and what's different?

Colonel Lankford: Yeah, so, you know, I, flew T 37s in pilot training as you did, and then you probably...

Heather "Lucky" Penney: That's why I called it the dinosaur era.

Colonel Lankford: Oh God, the 37, what a horrible, horrible airplane.

It was a great airplane. It just wasn't fun for me. But then I went to fly C 12s at Corpus Christi. With a joint naval pilot training there as a lead into C 130s. So, when I was a squadron commander and I just started flying the J and I became an [00:42:00] instructor pilot, it was difficult to communicate with the co pilots and young ACs, aircraft commanders, who I was trying to teach. Because, you know, I couldn't say, "hey, remember in the Tweet or remember in the C 12..." because they had flown T 6s and T 1s, at that point for the most part.

So, it forces our instructors to really perfect their abilities. And I always would tell instructors at the schoolhouse, if you have an intelligent motivated student who's not getting it. It's not their fault, it's yours. Because they're not the ones with years of experience and tools in their bag that are going to allow them to succeed.

You have to flex your training techniques to how you perceive they receive information. So, what we did initially with the Pilot Training Next and think it was UPT 2.0 or whatever they were calling it at the time. Yeah, they get their

wings after 6 months and then they still go to T1s for a shorter mobility fundamentals course, or for 38s, they still go through [00:43:00] T38s.

They just have wings and then go from there, but we did nothing at first because I just kind of wanted to see, you know, what is the difference here? And I was adamant with the instructors, both at the simulator and on the flight line that, you know, "I don't want you to even know who they are. Don't try to look them up. I want you to treat them just like every other student," because if not, we weren't going to understand where there were differences.

I'll tell you, we didn't see a ton while I was there. Now they were just coming on, coming online when my last few months. We didn't see a ton of differences, but what we authored at the time was a way to increase repetitions using VR and changing up some of the simulator profiles to flex our training to the type of things that they were getting a pilot training.

So I, we actually went down to Randolph to T6 pit down there and I'm standing in the flight room and there was no tape on the floor. Because you remember the pattern on the floor that we used to tape on the floor, we would literally walk [00:44:00] around the flight room and make radio calls.

You know, and it sounds ridiculous, but it was it was extremely effective. There was no, I said, "where's the tape on the floor?"

Heather "Lucky" Penney: That and the toilet plunger, right?

Colonel Lankford: Yeah! Yeah! "I said, where's the tape?" And the squadron commander looked at me and he pointed over in the corner and there was a student sitting in a T6 chair with a VR headset on, you know, in a stick and throttle in his hand, and he's looking left and right. And he's talking to an air traffic controller. Who's sitting in a different part of the room, looking at the same VR he is and acting as air traffic control. And I thought, wow! So the A10 schoolhouse is really good at this and they develop VR for their students to where they show up, they get a VR kit they're running through all the checklists with help in the VR. So when they show up on day one, pretty much know what they're doing. So we started the process of buying the VR kits and implementing all that. And I hope that's continued. I haven't really kept track of it, but we are going to have to change how we train to fit what [00:45:00] our students are used to.

You know, this is a very different generation. They're much more tech savvy. They're brilliant. But they're used to high end video games. They're used to high

end computer games and what they've done down at Randolph is really incredible with the VR and the way they train. And so we have to change in order to meet their needs as students and teach the way they're used to receiving information.

So I'm excited to see where that goes. But I'll tell you I have a lot of confidence in that product out of pilot training because I'm the recipient of it here now, at the 317th. I felt like what we were turning out was a pretty good product by the end when I left the 314th, with with those Pilot Training Next Students. And I can't tell the difference between them and what we were getting from the schoolhouse 10 years ago when I was a squadron commander.

Heather "Lucky" Penney: Well, you know, it's just good pedagogy for an instructor to adapt their approach and their technique to the students unique needs. And also why would we not want to use the advantages of VR advanced technology and [00:46:00] simulation to improve the quality of the training? I mean, I would have happily given up the toilet plunger and the tape on the floor for the pattern for some kind of VR, because that would have made me even more prepared for the flights that I took. So I'm really excited about the potential for how this kind of training can not only help students in the pipeline, but perhaps even up level the game as we do mission rehearsals at the operational level.

How did your real world experience, though, shape the lessons that you tried to impart to them and that you're trying to impart today, as a commander in the 317th?

Colonel Lankford: Yeah, so, back after 9/11, we as a C 130 force and many others were, we were pretty much deployed four months on, four months off. We got a lot of hours, a lot of combat hours in a very short period of time. And then I left the deployment. Went straight to the weapon school, got done with the weapon school deployed immediately, came home with straight to SOS deployed again, and then came back home and went pretty much straight on weapon school [00:47:00] cadre.

So, we got a lot of experience in a very short period of time. And especially Afghanistan is a very challenging environment to go and land an airplane in the mountains. There's not a lot of drag up there at places like Shindan and Fobshank and frankly Bagram, you know, it's just under 5, 000 feet. But a lot of these airfields are up 6, 7,000 feet.

So as a not J baby, I had to learn the nuances of the J, but told is told, performance is performance, you know, told being take off landing data. It is what it is. And so, what I have brought is a lot of experience from my younger days, flying combat, from the weapon school and how our weapon school, I try to stay on top of the things they're teaching because it continuously evolves because it has to, because the shape of combat continuously evolves.

So, there's old pilots and bold pilots, you know, but there's no old bold pilot. So I try to just pass on a lot of the lessons as an old pilot that I've learned. We can often fall in love with the technology [00:48:00] and forget the fundamentals. And that is one thing I do see and have seen flying the J, as an instructor at the schoolhouse here at Dyess as an instructor, as a squadron commander, is we get really wrapped around the axle about some of the tools on the airplane. And forget that at the end of the day, it's a person with a machine, and you have to have the skills to be able to put that thing on the ground in a tight space. In a 500 foot landing zone in the mountains at high altitude. So I have forced us to train in those environments and to train at the highest level regularly because it's the stuff I wish I had early on in Afghanistan when we didn't know we didn't know. And we didn't know that we needed NVGs, we didn't look real hard at a lot of the told problems that we were going to have and just the weather issues and things like that.

And that goes for maintenance as well. There's a lot of lessons learned that our older maintainers have to constantly pass on because maintaining an aircraft in the Pacific with salt air and things like that is very different than maintaining an aircraft in [00:49:00] a hot, sandy desert environment. So, you know, the main thing is just understanding the environment we're going into and using our experience as older folks to make sure we're training. So that when that level of training we fall to, as I've said, is enough to win.

Heather "Lucky" Penney: No, absolutely. I'm glad to hear you talk about Airmanship and the fundamentals because you know, that's how bold pilots become old pilots.

Colonel Lankford: That's right.

Heather "Lucky" Penney: But, we will need to be bold in the Pacific. So given everything that we've discussed, what do you think your air lifters of the future are going to need to look like from a training experience and mentality perspective?

Colonel Lankford: Yeah, so they need to continue to push ourselves on a physical level, as well as, an intellectual level with aviation. For instance, our recent flight to the Pacific, we took off out of Dyess with our external tanks and we one hopped it to Hawaii. And, you know, that was about a 12.7 hour sortie. No, no slick C [00:50:00] 130J had ever done that before. Because we just, we didn't have the legs and certainly no H models and then they got gas and they turn around and took right off again for Guam and flew about an 11.7 (hour sortie) to get to Guam. That is physically pretty tough...

Heather "Lucky" Penney: Yeah..

Colonel Lankford: (Tough on) crew. And, you know, there was no pre positioning cruise or anything like that. The folks that were flying the first leg went to the back on the second leg and got a nap or tried to. And the folks that were sitting in the back on the first leg hopefully slept and got up and jumped out on the next leg and flew that 11.7 (hour sortie). We have things like go pills, which have been used by the bomber and fighter communities for a long time, but not so much in mobility.

We are experimenting with a lot of tac STEM type things. And dietary things and other stuff like that with our medical group. Make ourselves more physically ready to go execute for long periods of time and maintain the mental sharpness we need to go execute. There's a [00:51:00] lot of ways you can overcome these things with diet.

With the tac STEM and you know, with the go pills, if you have to, but at the end of the day there's not a lot that replaces just being in shape. Being in physical shape, you know, like when you were flying F 16s, you had to be pretty strong to pull all those G's. We don't have to pull a lot of G's in the J, but we have to fly for a long time and the better physical shape you're in, diet, exercise, all those things.

The better you're gonna be able to perform in those periods where you have sleep deprivation and things like that. But, you know, from a capability standpoint, we have to continue to work with folks like SAFIE and, AFRL, Air Force Research Lab and things like that to help continue to make small adjustments to our aircraft that pay big dividends.

SAFIE, specifically the fuel efficiency office of the Pentagon, it has some attachments you can put on the tail of the airplane to give you, you know, 8% more fuel efficiency. Well, that doesn't sound like a ton, but on our, recent jump from here straight to Hawaii, it would have saved us about 4, 000 pounds of gas.

Which [00:52:00] is just under an hour that can make a huge difference. So we have to stay physically and mentally good, and we have to, be willing to go out and try new things and new technology, see what works and what doesn't. We have to be risk averse. They're going to be times where we have to stretch ourselves and test the limits of what these aircraft and human beings can do.

And, you know, we have to be not afraid to go do that. Certainly as commanders, General Minahan is not risk averse. He always tells me. Don't bend anything or, anybody. And other than that go. And I, we, we have taken that to heart at this wing and I trust him and, I trust our airmen. But we have to continue to be able to push the envelope and find out what we can and can't do with this airplane.

Heather "Lucky" Penney: I love that you brought that up because you do have to mitigate and manage risk, but you can't be so risk averse that you're not willing to take that leap and really stretch your personnel. You're going to need to have the grit, the perseverance, the expertise.

The airmanship, that judgment of knowing when to take those risks. I mean, you guys are running a marathon here and it's really exciting to hear how you are pushing the [00:53:00] envelope, especially with your accelerated mission sets. If we were to visit the 317th in five or 10 years, how would you know if you're winning or losing?

So what does success look like?

Colonel Lankford: Success looks like there should be some extra things hanging on the airplanes to give us more capability. We should be constantly out there working in high end exercises with joint coalition partners to go and make ourselves better and make them better. We should be continuing to educate ourselves, continuing to stress ourselves. You know, you I got to sit with Brene Brown recently at Rally in Tampa which is our Air Mobility Command kind of wing.

Heather "Lucky" Penney: That's cool.

Colonel Lankford: And summit every year. So I got to sit with a small group with Brené Brown and she's talking about mental toughness.

And I am convinced that a, every human being has the ability to be mentally tough. We are the product of all the survivors. We're the product of the alphas

that survived [00:54:00] over the last several million years and made it through all the trials and tribulations and hardships that the earth throws at you.

So we all have it, but you don't know to what level until you stress yourself. So I expect that the three 17th and my, I know my predecessor will, and his predecessor and so on will continue to stress the cruise in a healthy way. Test them so they can find out what their limits are and find out just how mentally tough they are and how creative they can be.

We have to maintain that aversion to risk and manage it and continue to get it better and better because our adversaries absolutely are. They're looking for a million different ways to beat us and kill us. And we have to be ahead of that and we have to maintain our supremacy and superiority so that they don't try. And, you know, the goal is always deterrence, but if deterrence fails, we don't have a just under 900 billion dollar defense budget because the American taxpayer expects us to lose. So, I expect to continue to train hard, to work hard, to think hard. And to go out [00:55:00] and exercise these things so that when the time comes, when we are stressed in a combat environment, the level of training we fall to remains high enough to win.

Heather "Lucky" Penney: I love how you talk about mental toughness. I mean, it really is a skill and something that we can develop and something you can train to and exactly what you said, that's the level of training is will be the level of performance.

And a key part of that is purpose. You know, a few weeks ago, I had the honor to fly in a World War II era C 47. In fact, it was the very aircraft that led the aerial assault for D Day, That's All Brother (name of aircraft). You know, it really drove home the importance of your mission, your purpose. Air mobility has been a foundational capability that we have relied on as a nation and our allies and partners for decades.

You know, we can't fight or win without it. And you talked about your forefathers, your predecessors, they figured it out and frankly invented it in World War II from flying the hump, to the Berlin airlift, which averted World War III, you know, I don't know what we would have done without the air mobility.[00:56:00]

And I'm confident that your team will rise to that occasion again. The challenges are tough, but what you and your team are doing on the flight line is incredible. Thank you so much. And please pass our very best to everyone at the 317th.

Colonel Lankford: Hey, thanks. Lucky. It was a real pleasure to talk to you today and thanks for the opportunity.

Heather "Lucky" Penney: Thank you, Tom. See ya.

Colonel Lankford: Adios.

Heather "Lucky" Penney: With that, I'd like to extend a big thank you to our guests for joining in today's discussion. I'd also like to extend a big thank you to you, our listeners, for your continued support and for tuning into today's show. If you like what you heard today, don't forget to hit that like button and follow or subscribe to the Aerospace Advantage.

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Thanks again for joining us and have a great aerospace power kind of day. See you next time.