

Aerospace Nation: General Mark D. Kelly

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SPEAKERS

Frank Wolfe, General Mark D. Kelly, Brian Everstine, Lt Gen (Ret.) Dave Deptula, Kamilla Gunzinger, John Tirpak, Rachel Cohen, Pat Host, Valerie Insinna



Lt Gen (Ret.) Dave Deptula 00:16

Well, good morning, ladies and gentlemen. I'm Dave Deptula, Dean of the Mitchell Institute of Aerospace Studies and welcome to our Aerospace Nation series. We're really fortunate today, that general and Mark D. Kelly could join us. General Kelly is the commander of Air Combat Command, located at Joint Base Langley Eustis in Virginia. And in that role, he's responsible for organizing, training, equipping, and maintaining combat-ready air, space, cyber and intelligence forces for rapid deployment as well as employment. This includes making sure our air defense forces are ready, and can maintain peacetime air sovereignty in addition to meeting wartime demand. So welcome, General Kelly, and thanks very much for taking the time to join us today. I'd like to start off by giving you an opportunity to make some opening remarks. So if you would, we're looking forward to hearing an update on what's going on down at Air Combat Command, and just what your priorities are for the future. So with that, thanks very much, again, for being here. And over to you.



General Mark D. Kelly 02:06

Okay, well, thanks. It's always good to catch up with current events inside and outside of DC. I'm happy to revisit moments from last month's AFA would be fighter roadmap or other discussions during the q&a session. But since that, those sessions are pretty well documented, our time is limited. What I want to do is start with some of the bit of the less shiny, less sexy aspects of our key efforts in around ACC which is sometimes our enablers and our other efforts. And so first, what a one dimension. And I didn't have time during AFA just because again, time is limited to talk about some of those key parts. And one I'd say first and foremost is our allies and partners that we work with both both here at ACC and the other maj comes around the globe. Because namely, for us to protect power, we have to have access basing an overflight, it's important to know which allies and partners will provide assured, assured access and a time of crisis in which allies and partners provide high end interoperability are better which allies are truly interchangeable because they're up to a very, very high level of capability. These partnerships are important efforts, so they stay in the forefront of what we do. As well as my other match comm commanders out the Pacific in Europe and elsewhere. They provide great security benefits around the globe, the logistics, the comm, airbase defense structure, Command Control, lift, domain awareness, they're their foundational for us to project power. So key key part of what we do day in and day out, I'm on the phone with some treaty allies every now and then during the week. Second thing I'd like to mention is that I didn't get to call this out as well as I should over like to, during a phase our rapid global mobility, our strat lift and our air refueling. I mean, no one who witnessed our C-17s and other

air lifters evacuate 124,000 Afghan allies to a new free life questions the power of us strategic airlift. These are the same capabilities, though they will quickly get us to a fight. And they remain foundational enabler of global power projection for the joint force I've never deployed to a combat zone without significant airlift capability. I've never employed a weapon that didn't first require a visit to an Air Mobility Command tanker. And now our current efforts of agile combat employment brings its own unique of logistics. Challenges in our mobility warriors are really ready for the task as we train for Ace around the globe. Third, I would mention something you're very familiar with and that's our intelligence surveillance reconnaissance capability. As you know, it is a key enabler we need our ISR to be Well persistent, connected and survivable. Right now we're very persistent. And we're connected well through our DC GS, for processing exploitation and dissemination, but our kind of activity needs to expand to a real time node connection in ABMS. And we're working that hard. The survivability of our ISR enterprises a focus area from fixed wing archy for YouTube and all the way out to ISR equities in orbit. Next area I would mention with respect to key enablers and key efforts is our airbase defense. The Air Force is infrastructure defense efforts are currently focused on directed energy research development test evaluation, counter small UAS investments and cruise missile defense to be an operational inside force. We need airbase hardening, we need active and passive defenses and we need agile combat deployment. I mentioned during AFA that our Israeli Air Force partners when I talked to Joe norkin. Over there, their chief, he wakes up every day under the cover of an Iron Dome. The Finnish Air Chief and that nation operates their air force out of a Granite Mountain. The Chinese and our other adversaries operate under layer upon layer upon layer of air defenses. I'd like all three, but I need at least one and we're working hard with our service partners on those avenues.



06:35

We're always as a service like our other services, striving to make sure we have decision superiority. If we're going to queue up decision superiority, we need info superiority, which means besides ISR, we need domain awareness and in our case, air domain awareness. We're fortunate and unfortunate every day to have the best maintenance airman in the world working on our E three sentry AWACS from the flight line, to the back shop, our propulsion, airman, phase, Airman all the way across the ramp at Tinker to the depot. But while the three is served our nation Well, there is not a 2021 global supply chain for seven Oh sevens. They're just not. That's because there's exactly zero Airlines on the planet that operate the 7070. So we're actively looking for more advanced AMTI capability to commencer with our closest allies that are ahead of us in that endeavor. And last thing I'll mention, because I want to get to your questions and topics from yourself, if you have them and then out in the audience is well not an enabler. And I mentioned at AFA that we need 5th gen weapons for our 5th gen Air Force. We've invested a lot of time, energy and national resources to build a low observable force, whether that be B-2s, or upcoming B-21, or F-22s or F-35s etc, we will not get a good return on that investment of low observable platforms. If due to weapons limitations, we have to push them into ranges where everyone is observable. So let me stop there for now to ensure we get to your questions. So over to you or the audience, whichever you prefer to go to.



Lt Gen (Ret.) Dave Deptula 08:29

Well, thanks, General Kelly, for those insights. And before we jump into question, thanks for all that you and your team are doing to maintain our nation's security. And so before we get into some questions from the audience, let me start with a couple of my own back when you are the Air Force 83. You spoke about the capacity crunch facing the Air Force and you had a very powerful example where you explain the assignment of aircraft and personnel in a variety of scenarios and combatant commands, if they were always running out of air power before their core needs were met. How is your time in Air Combat Command impacted your thinking and in that regard?



General Mark D. Kelly 09:17

Now Good question. Capacity is on the forefront of everything we do every day here as I discussed capacity during AFA and warfighting capacity is as important as any capability. Specifically, you know since Desert Storm since 1991. You know, we've gone from an Air Force 4000 fighters that averaged around eight years old, they were home to fight a pure adversary, namely the Soviets. Today around 2000 fighters that average 28 years old that have been optimized and acclimated for Middle East operations. You can handle a Middle East operations with a smaller and older fighting force, a peer adversary puts sustainment in performance demands and our force that generates significant stress and risk. On our smaller and older fighting force, quantity has a quality all its own. And we need every shooter we can get on the combat frontier, I would not advocate that we reduce our capacity from its current state. And so thanks for bringing up that key topic.

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Lt Gen (Ret.) Dave Deptula 10:30

Well, a bit of a follow up, you're very well aware of the fact that is not just about mass capacity. But it's also about having the right capabilities. So we need a modern force mix. In that regard, what are your thoughts on the type of capabilities we'll need to acquire to get out of a ratio where 80% of our current fighter inventory was bought by the Reagan administration?

G

General Mark D. Kelly 10:55

Yeah, well, thanks. Yes, having 80% of our current fighter inventory. And you know, I'm a common nutty historian, having 80% of our current fighter inventory from the Reagan, administration is an issue. But it's the assets from the Johnson Nixon Ford Carter administration's that you can insert us all t said, the T seven is on its way. But for now, we still train our fledging fighter pilots in the 1960s, t, three eights, and then put them straight into a 2021 model F 35, or other advanced fighter, we still fly a 1023 centuries from the 1970s, etc. So besides high end capability, we need affordable capacity that's relevant. That doesn't average 28 to 30 years of PR MDS per weapon system, if you would, our F 16, or main, our affordable capacity fighter into the next decade. And we're working hard to keep it relevant for the modern fight, whether it be airframes, sensors, weapons, etc. So, so thanks. Thanks for the obviously the capacity dynamic, that's important.

L

Lt Gen (Ret.) Dave Deptula 12:11

Yeah. And you alluded to capability. And it's important to earlier, but if you've got a budget plus up, I know, that's a long shot, but many of us are. And then folks in the Congress to are aware of the significant challenges the Air Force has been put in, but what are the sorts of capabilities that you'd prioritize?

G

General Mark D. Kelly 12:34

Capability wise, I'd say we, first and foremost have to fully fund and get to feel the 16 year superiority. I discussed that during the fighter roadmap, and I'm happy to continue or revisit that dialogue. But feeling a capability this designed operate beyond a single spectral band of the RF spectrum, to thrive in a multispectral environment and a capability that operates outside of European combat ranges, that senses and connects and then I can put in the adversaries backyard is key. It's not just key for the Air Force, it's key for the joint force because the joint force is organized train equip dot bright with air superiority is not remotely remotely designed, operate without it, and everyone's counting on the United States Air Force to provide that. And then the other capabilities that I already mentioned and touched on whether be the fighter roadmap, or my opening comments would be fifth Gen, you know, AMTI, fifth Gen weapons for AR 15 Air Force. And then I already mentioned air base defense, and then the realization of a BMS, because of the criticality of C2 and a peer fight. Thanks.

L

Lt Gen (Ret.) Dave Deptula 13:48

You bet. Now looking at modern threats have been during operation here resolved, we saw the Russians deploy a double digit Sam's to the region. And we're working to deter direct engagements with Russia and China. But if we can do that and be successful, we're still going to see their high end equipment in lesser contingencies. How do we manage this new type of threat or these new type of threats in the demand that they may portend or foresee?

P

14:22

Yeah, when you when you open the question with modern threats, I thought you're going to take a little bit different angle, but to your specific question, modern threats it goes to is, you know, our ISR enterprise in the electromagnetic spectrum enterprise to provide awareness of these modern threats. You know, if we know where they're at, we can handle them in our organic capabilities on our shooters actually do a pretty good job of their own EMS. Sensing if you would sensing grid that we need out in the fire force, but when you first brought up that Question of modern threads. Those aren't those, frankly, aren't the modern threads, they keep me up at night. On the other hand, you know what we've read over the last few weeks a fobs, and a fractional orbital bombardment system that we have read about from China that they just tested with one of their hypersonic vehicle that unlike for those folks who follow this, unlike a ballistic trajectory, or even a hypersonic glider trajectory, and there's low earth orbit, and the deorbit, to maneuvering hypersonic terminal stage should concern us all, every single one of us. That's a citizen of this nation, you know, and these are things we open up and see, not on our daily, classified Intel, not on our very, very highly compartmented classified Intel. This is stuff that's in our unclassified newspapers today. And that's there. And we should take note, because that is a great power capability. And the Chinese are serious about displacing this nation, in every domain and at every turn. That's why we also open our newspapers, we see our partners and allies. So for example, the Australians a couple of weeks ago committing to an investment of advanced detect submarines, because they know they have to invest in great power capabilities. Now, on the other hand, if I if we open our newspapers, and we read in the Shanghai English version daily, that for example, China was going to refurbish an entire fleet of 45 year old attack planes that they couldn't use an appear fight. Well, then we know that they frankly, weren't serious about winning.

L

Lt Gen (Ret.) Dave Deptula 16:47


Okay, moving on, and something that you mentioned, and it's of interest to everybody tuning in today, defending our air bases in power projection infrastructure, is also becoming increasingly challenged. Uh, could you explain for our audience, just how agile combat employment or as my the acronym it's known by, aims to address this, and what kind of progress are you making in actually implementing this concept of operations?

P

17:19

Yeah, it's, it's really going well, it's not without its challenges. Namely, it brings on a new logistics challenge, and it brings up a new calm and thus see to challenge but it's really going well. It's essentially operationalized in the CENTCOM theater. So as operating to and from disparate locations happens every day in CENTCOM as we take off from one location. refueled another rearm at a third and maybe in the day, that the fourth for example, I frankly have a hard time keeping track of exactly where our forces spend the night every day in CENTCOM. That's actually a good thing. Because the 10 junkie, oh, the absent commander knows exactly where they are, and knows exactly what

their status is. We've also recently conducted big agile command deployment exercises, both in pack AF and you CEPII. And ACE has gone from niche to mainstream and our airmen really thrive in this environment. They took to a really well and they want more more of it. So now it's actually going pretty well. Thanks.

 Lt Gen (Ret.) Dave Deptula 18:26

A very good a bit of a follow up. Are there any takeaways that you can share from the recent exercises like rally in the Rockies 21 and skyshield. Three.

 18:39

Other rally in the Rockies, if I'm not mistaken, was mostly if not exclusively, the 3/55 fighter wing at a DM operating in around p field and other outstations and in around Colorado Springs and skyshield. Three was was one of the ACE type events we did in FCM. This one we did with some regional partners, most notably the Qatar ease, we're at a big play in that. But what we see out of all of these exercises is the need, as I mentioned before, for innovative solutions to logistics and C to our command control, for example, we as an Air Force, we as a nation didn't design the HC 130 J as a ace, C C2 node. But when you have a platform that can move pallets, gear tools, airmen, that comes with organic SATCOM, datalinks, HF comms, it's really powerful and helps our forces move in around theater and sustain the pace of combat ops and complicate adversary targeting and so yeah, it's a key topic and thanks.


 Lt Gen (Ret.) Dave Deptula 19:53

Um, you mentioned a little bit earlier the challenge of maintaining a big wing command and control ISR inventory, but at the same time, it continues to be in high demand. But obviously old and increasingly costly to sustain. At the same time, it's going to take us many years to fully realize jetski to vision, which we'll see many parts of this mission distributed. But we still need the command and control skills. You just mentioned, why distributed in relevant relevant locations across a battlespace? Could you talk a little bit about your bridging strategy between the two where we are today and agensi to in the future? Now appreciate

 20:36

your right, we do need to bridge where we're at. So I would say when we discuss evolving C2, you really need to look through the lens first and what I'd say C three, what I mean by that is the communication piece to command and control is key. If you kind of if you kind of go backwards to look as we go forwards when we started operation and during freedom 20 years ago, we put J stars in a wax overhead for the entirety of our operations, which provided continuous command control over Afghanistan because they provided continuous calm nodes over Afghanistan. And as the years went by the organic platform, SATCOM, of a fighter bomber airlift, and the domain awareness that was provided increasingly by ground based radars meant that our connection to say, for example, the 609 DAOC, or an air sport Operations Center, inside or outside of theater was instantaneous. And it's regardless of the distance and so you can see a migration just there in that short time. That's worth noting. And so now, as you kind of look and go forward, you realize that these are the types of distances and constructs we'll need in the Pacific to stay connected now to say the 613 AFSOC. But unlike Afghanistan, we need a modern sensing grid. And that can make sense of that, that area, and it can keep pace with the modern fight. So the short version to that is will bridge our dead sea to BMC with eye space conductivity, SATCOM and by modernizing our sensing grid, but really, really good question.




 Lt Gen (Ret.) Dave Deptula 22:33

Very good. Let's shift gears a bit General Kelly and talk a little bit about remotely piloted aircraft in the future. The MQ nines obviously, been a tremendous Mission Asset against terrorist and insurgent forces in permissive airspace. And given the capacity challenges that face the Air Force right now. It seems like it might be prudent that the Air Force look at expanding its use past what we've seen over the past 20 years. And while we all understand we're not going to see these aircraft over the highest threat areas, are you considering other areas where they could pick up mission demand, for example, to free up fighters to flow into the fight? Some examples might include cruise missile defense or maritime patrol, that kind of thing. What are your thoughts?

 23:20


Yeah, no, good question. So, you know, a pivot to great power competition means you're going to pivot to great power weather conditions. And that requires increasingly auto takeoff auto land, that we're modernizing much of our MK nine fleet to have that capability. Besides being able to top rate in more austere weather, mostly takeoff and land, whether auto takeoff auto land reduces your forward LRE your launch and recovery element footprint and allows us to forego some requirements for example, we had before we go into host country, we normally in our legacy RPA fleet have to get permission to transmit certain RF bands for the for the LRE having auto takeoff auto land obviates that that requirement so it's very very helpful unlike the original are Q one and Q one and Q nine can lift a pretty decent weapons or sensor load if you download the weapons you can upload pretty good central a good example that is our Gorgon stare capability that we we used of IR Neo sensors. So short version is is it having 20 hours 20 plus hours of sensor utilization, whether it's IR or EO Synthetic Aperture Radar other sensors means that the cost per flying error that we get and then Kenai means it'll continue to be a key contributor to our sensing grid.

 Lt Gen (Ret.) Dave Deptula 24:54

A bit of a follow up what are your thoughts on what comes after MQ nine out there in the future

 25:02

Yeah, well just like I mentioned, like the our q1 turned into the MQ one and the MQ one drove our feeling into the MQ nine for increased payload, increased relevance. Increased lethality, as example I'll give you is, as we look towards add air UX our adversary air unmanned capability that we're just putting our toe in the water on, will execute that unmanned adversary air effort. But, you know, we it's probably smart that simultaneously as we do that, and we put, say, for example, an ad air UX capability out in the western ranges of Nellis when they're not providing that emissary air Look, they're sitting right over some pretty powerful ground sensors that we use to replicate the adversary. The will use those to assess the capability of faster, lower radar cross section multispectral, unmanned system in around those threat arrays. And I think it'll inform our way ahead, so we'll get kind of two different efforts out of that enter UX investment.

 Lt Gen (Ret.) Dave Deptula 26:11

fascinating observation and appreciate that insight. Now, earlier, you spoke about the importance of ensuring we have fifth generation weapons and surveillance capabilities to complement our fifth generation fighters. Meanwhile, the Airborne Early Warning inventory remains outdated and it's only getting older. So could you elaborate a bit why you think updating the Air Force's airborne moving target indicator capability is so important, and what solution are you advocating?



26:43

Well, as I mentioned, we all want decision superiority. And the only way we're going to get decision superiority is ever information superiority. The only way we're going to get the information we need is to have domain awareness in the domain. The Air Force is tasked to understand is your domain. And as I referenced earlier, and I think our reference today fa 707 has served as well. It's served airlines well. But since 2013, exactly zero Airlines on planet Earth operates 707 Because it's unsustainable without Herculean effort. We're fortunate that we have miracle workers every day on the flightline tinker and Elmendorf and Kadena and where we operate our E three centuries. But there's only so many miracles, these miracle workers can pull off. Before physics comes into play of a 45 year old airframe, we also need to look beyond just the the material challenges we have and realize that we need a multispectral solution to a multispectral problem. And that's what our allies have gone to with the E seven Wedgetail. It's not just interoperable with what we need to do, it can be interchangeable with what we we do in terms of capabilities. So it's obviously a key effort that we're looking towards, and we need to it can't happen fast enough. So thanks.



Lt Gen (Ret.) Dave Deptula 28:07

Okay, no, thank you for that a little bit, a broader set of questions. Now, before we head over to the audience. Could you give us your thoughts on what's different about the Air Forces force structure from how the other services use their aircraft? I mean, two quick examples that come to mind are the homeland defense mission, as well as the percentage of service component aircraft available to a Joint Force Air Component Commander at any given time?



28:39

Yeah, well is, is our motto says its airpower, anytime, anywhere. So besides homeland defense, where United States Air Force provides 100% of the aviation assets, mostly from our Air National Guard team along with our Coast Guard partners, some of that, quote unquote airpower, anytime anywhere, some of that airpower is their superiority, some of that airpower strategic attack in the anywhere means it could include an adversaries sovereign space, if required. As I mentioned before the joint force and not just the Air Force, the Joint Force requires the Air Force the United States Air Force, to provide air superiority, and our joint force is organized train equip, to operate with their superiority, it is not remotely not remotely designed, operate without it. Also the outside my normal lane of expertise, we have to acknowledge that the Air Force provides the nation with strategic attack via you know, B-21, and soon to be b 21, or other bomber capabilities. These types of capabilities don't require basing rights, foreign ports. They take weeks and months to set up no other service and for that matter, no other allied nation provides an allied coalition with a bomber force and we need to remember every day Those no fail missions as well.




Lt Gen (Ret.) Dave Deptula 30:03

No, thank you for that. On future risk for the past 30 years, we've gotten used to operating in a relatively permissive environment. And we tended it at the planning level, we tended to not really think about attrition and loss inventories that much. We shrunk our pilot production pipeline, to one that affords almost no elasticity in our industrial base has little surge capacity. How do you look at building back in the margin will likely need for combat losses in the event of pure conflict? I mean, you know, more than most that it takes years to acquire aircraft and train pilots. So I'm guessing that we'll need some more capacity, your thoughts?



30:53

Yeah, well, we discussed. We discussed aircraft capacity earlier, but I'm glad you brought up the pilot capacity. What I would add to that is the sustainment capacity. Historically, pure fight Air Forces normally lose, because they run out of pods before they run out of platforms. Even in World War Two Germany in Japan ran out of pilots before they ran out of airplanes. In a pure fight will take losses in both so we need capacity in both our sustainment enterprise. In our weapon systems sustainment accounts, are designed for steady state, often just in time, logistics supply chains, and a ramp to a surge sustainment and supply capacities tough, very tough business. It's not like turning, for example, the Ford's Willow Run plant into a B 24 factory that oh, by the way, produced a bomber every 63 minutes or two, or turning a Packard plant to convert it to produce Merlin engines. It just doesn't happen in today's supply chains and high tech manufacturing practices. So the short version is is that we will enter a peer fight with the capability and the capacity in people equipment, platforms and resources that we have on hand and be very challenged as every nation will be very challenged to surge industry to meet the demands of consumption that a purifi would bring.

 Lt Gen (Ret.) Dave Deptula 32:39

Thanks very much for that. I mean, it does underline the importance of kind of changing our mindset from what we used to have and one of the key elements of pure fights in the in the future. Well, General Kelly, thanks again for your comments and sharing your valuable perspectives on the future of aerospace power. Before we roll into the audience q&a, I just wanted to make the audience aware that we're planning our next senior leadership Aerospace Nation event for Tuesday, November 23. When we'll be hosting General Ken will Spock the PAC half commander and we hope you all join us for that. And tomorrow we're going to be doing a virtual rollout of our latest research study. Building a bridge getting to the Future Force fighter force our nation needs by Heather Penny. So please join us for that one too. So with that, let's take some questions for the audience. When I call on you. Please state your name and affiliation for our guests before asking your question. And as we're lining up people to ask in person I've got a text question for you from Mr. David. wata. In it touches on something that you mentioned right up front and that is relationships with our partners. And here's this question, integrating the Global Hawk F 15, F 16, F 22. And f 35 has been ongoing within Air Combat Command as our allied partners receive the F 35. How is Air Combat Command working with the Royal Australian Air Force, Japanese yourself Defence Force and others to ensure integration of not just fourth and fifth generation but the bilateral security needs as well.

 34:34

Thanks for the question especially like you mentioned the bilateral security needs. So first of all, with respect to bilateral security, you know the F 35 is a global supply chain and which means it has a global supplier chain. And there are manufacturing sources that come out of you know, Italy and Japan and other other countries that are in the consortium of F 35 and so on. Our cybersecurity for the entire F 35 program is only as strong as its weakest edge, if you would have all of our folks that helped work on the parts and supply chain that 35. To the other parts of the cybersecurity or just security in general, besides training and tactics development that we do with our partners, we actually have partner nations that work in a joint test team at Edwards, British and Australian, and Netherlands, etc. One of the bigger things that we work with our partners on it's less about the hardware and more about the software, we got to make sure that our networks can talk to each other, we can share information over a network, a warfighting network, mainly they get the Madilyn link 16 networks. The other software piece is making sure simulators are up to speed. The other software piece is make sharing our Allison our Odin can talk to each other and share logistics information. And so while we talk a lot of hardware, frankly, most of the energy that I end up committing ends up going down the software lane of mission data files and simulators analysis and Odin and stuff like that. But no appreciate the question. It is a continual piece we work with an F 35 is probably the most visible ally and partner capability we share with other air forces.

L Lt Gen (Ret.) Dave Deptula 36:26
Okay, let me turn it over to Mr. John Tirpack.

J John Tirpak 36:31
And good morning, General, how are you doing today?

G General Mark D. Kelly 36:33
How are you, John?

J John Tirpak 36:34
Just fine. Thank you got a couple of questions of things that have happened since we spoke with you at AFA. There have been a couple of announcements, the Air Force looking for the East seven Wedgetail. And also an Advanced Tactical trainer. I wonder if you had if you could give us some indication of when you want those things to be in the inventory. So we could figure out what what's going to happen between now and then.

G General Mark D. Kelly 37:02
Yeah, no really good question. And thanks, I kind of already comment on these seven as far as when I want them. When I want them in the inventory, it would have been two years ago. So not to be flipping on that. But that's actually what I the answer I would give you or Congress or anybody else. Because as I mentioned in my opening comments, we to the seven letter domain awareness piece, I frankly, don't think we we me, including me, have done a really good job of unambiguously articulating the no fail mission of the air domain sensing piece that we owe not just the Air Force, but the joint force and that are phenomenal operators, the sustainers of the three are working hard every day to to provide both in the homeland out on the on the pacing theaters. So I'd like it two years ago, when, but in reality, I've talked with our AQ folks on a recurring basis, and you saw the announcements of us pursuing RFIs with Boeing and Northrop Grumman, I frankly, will defer them with respect to how fast it can actually happen in terms of reality. I don't think it's going to happen in 2022, or 2023. But I can guarantee I'll be talking to them on a weekly basis to make sure that we get as soon as we can. There. With respect to the Advanced Tactical trainer, again, I kind of touched on that, with respect to every day are really trusty T-38. That that taught every four star in the Air Force and those that have retired, how to fly fast and how to operate in land fast and employ fast. They still if you look at the tail numbers, many of them are Johnson era 1960s tail numbers. And so every day that airplane becomes just another step more disconnected from the advanced avionics advanced sensing the advanced processing that our our modern fighters have, and so we can't fill that void fast enough. The T seven that our Air Force's procuring for Education Training Command, we need to train our youngest aviators. And the first I believe it's 349 is the program record or unquestionably going to Education Training Command to train those folks. But I need to get our aviators as soon as I can. And something that is not such a leap from a 1964 T-38 to 2021 F-35. Because right now I'm putting that bridge that we talked about a bridge earlier and C2 domain, I put in that bridge at tactical bridge on the shoulders of our young instructors on the flightline. And so, again, with respect to how fast that can come I would have to defer to our staff AQ team. But they get a call from me often about I needed that yesterday. Thanks, John.

J John Tirpak 39:59

Okay, A real quick follow up. You expect the trainer sometime within this decade or as after the T-7 is done delivering to ADTC?

G General Mark D. Kelly 40:13

You know I The short answer is I don't know, because I don't know, hey, what level of? First of all, I don't think we can just sole source, the T-7 that's for acquisition specialists to talk to me about No, by the way, there could be a different solution out there. But I need something like that. And then how fast industry can respond and give us something that is a little bit closer, something that's not 20,000 plus dollars cost per flying hour closer to two to \$3,000 Cost Per flying error that comes a little bit closer to our avionics. And so again, I apologize, John, I am the require not the acquire. And so I'm gonna defer to smarter people that do the acquiring it, we'll try to get you some better information as soon as we can. Thanks so much.

J John Tirpak 41:03

You bet.

K Kamilla Gunzinger 41:04

Thank you. As General Deptula is rebooting, We will take our next question from Rachel Cohen.

R Rachel Cohen 41:11

Hey, good morning. This is Rachel Cohen with Air Force Times. So the dual capable aircraft mission for fighter jets has traditionally been centered on Europe and NATO, supporting NATO. So with putting the B-61. On the F-35. Are you planning to expand the DCA mission to the Indo Pacific? And if so, how are you preparing for that?

G General Mark D. Kelly 41:32

No Really good question that Rachel that goes to, you know, our Nuclear Posture Review STRATCOM. You know, those are national policy decisions. And so not trying to be evasive on the question. It's just outside my authority and outside my swim lane. aware where we do and where we don't lay down nuclear capabilities. Obviously, those are not trivial, you know, questions and decisions of our of our policymakers. And so you'll probably know, about a week after I know, if we should if we choose to expand that, but I apologize. I actually don't know if I didn't know, I probably couldn't reveal anything.

R Rachel Cohen 42:12

Is there any sort of timeline for for deciding that?

G General Mark D. Kelly 42:17

Not that I know. Okay.

L

Lt Gen (Ret.) Dave Deptula 42:21

Hey, General Kelly, I'm sorry, I dropped off there, I got the blue screen to death, and I had to reboot the computer. So I don't know if you have already touched on Frank Wolfe. But if not, Frank, over to you.

F

Frank Wolfe 42:35

Oh, thanks. Hi, General, I just wondered if you could give us sort of an update on the F 35. A availability, I believe they're fairly recently of the 297 I guess assigned aircraft that ACC had, I think like 40, some odd 46. Were down for either power modules or some engine issues. But I wanted to see sort of your expect expectancy for on a daily basis, how many aircraft you would like to see, be able to be available to fly? And basically, if if the pilots have enough training right now, if they're called upon to go to war, I think at one time it was some 300 hours a year, I guess would be like 25 hours per month now that flight time. But I'm wondering what what the status of the flight hours per month that the pilots are getting to, to fly? And in terms of simulators, the hours that are any supplemental hours? They're

G

General Mark D. Kelly 43:44

No good question, really, thanks for the question. And so just starting with the first thing you touched on, I think your number is pretty close that few weeks ago, I'll go with a month to six weeks ago, we were down about 4648 f1 35 engines, we've actually made progress on that. And now I'll just say we're sub 40 without giving you a specific number, but we're making good progress. And they really use a testament to the teaming that we have with Pratt and Whitney at our main engine depo at Tinker Oklahoma City Air Logistics Center, they've just do phenomenal work there. And that number going below 40 is not a trivial accomplishment because they've gone below 40 At the same time are introducing jets more and more jets everyday to the system. So it's more than just a small improvement. It's an exponential improvement. And I expect them to continue that trend of getting toward zero just as soon as we can. But we've had to pull some levers to make sure we don't over consume our engines. For for not a good return on training investment. For example, I've had to curtail some of our errors show schedule east of the Mississippi unless we can utilize an airplane that's already in that area because I just can't I can't get conscious fly two airplanes from hill all the way to the east coast in utilize a bunch of flying hours while we have young, young age whether it be at Eglin or elsewhere and get their training sorties, but we are getting them, their training sorties. to your to your comment earlier about getting 300 hours a year. That to me sounds very high. The reason I say sounds very high is that same amount of flying I got when I was a captain, I really would like to get it to the captain's of today. But I truly believe that's a bridge too far. If we get them 200 hours a year. We're doing pretty good. They do mix their sorties with simulators. They're their life stories with simulators. And it goes to the training environment we provide them that operational winged Hill has great training airspace and the Utak test and training range. The operational squadrons were standing up, but I'll send Alaska have access to the joint Pacific Air range, which are great ranges, I'm a little more concerned about putting a whole lot of F 35 scores which we're going to do down in the southeast of the US for example, if we have when we fill out three F 35 squadrons at Tyndall, we'll add that to to f 35 squadrons. at Eglin, we'll add that to an F 35 Squadron Danly for the Alabama guard. And we'll add that to net 35 scored in Jacksonville. That's a lot of airplanes that need adversaries training infrastructures emitters on the ground. And I believe that our feeling of F 35 We have to put some effort focus to the training infrastructure to get them I'm more concerned about that training infrastructure in that area of the nation than I am about the specifics of hours, even though the hours is very, very important. But the short answer your question is we're getting them the training hours they needed they need, but we monitor that very closely. Thanks.

F

Frank Wolfe 47:05

Um, just a quick follow up just in terms of the when you're looking across beyond the well you said sub 40. Now for the for the F 135. So that, but in terms of the average availability of the F 35. A now to fly, it can fly a parcel mission capable of but still can fly. Just wonder what your what what that is now. And when you look at the actual squadron level data that you can, when you look at sort of any issues that you see is it really availability of parts, so the parts aren't, aren't living up to their their life that they're supposed to live up to? And, and if you have any thoughts on that,

G

General Mark D. Kelly 47:48

no, the squatters are doing okay. But regardless of it's an F 35 Squadron or an F 16 Squadron in the guard or an F 16 Squadron, the reserve or F 16 Squadron in the active duty rough math, if you kind of get out bar napkin math, if we run about a 65% aircraft availability rate, we're giving the Aviators the training they need, and we're holding the readiness we need. And we have the deployability we need when you take a squadron and you count the jets that you have down for depo are down for maintenance are down for supply. And you come out with a 65% aircraft availability, you're actually doing okay, because we can surge up to deploy or into combat, above 70. But I tend to look at 65% aircraft availability is pretty much a steady state line that I need to get from my readiness and my by training proficiency. So thanks. Good.

L

Lt Gen (Ret.) Dave Deptula 48:43

Okay, let's go to Valerie Insinna.

V

Valerie Insinna 48:50

I had a question for, you know, based on your answer to John Tirpack a little bit ago about the AMTI mission. You mentioned a RFI with Northrop and I must have completely missed what happened. There. So can you explain what you guys are doing with Northrop for that and, you know, connected to that? We've been hearing a lot about the Wedgetail. But is the airforce considering other options for an E three replacement? Because I would think that there are other companies aside from Boeing that have options or would like to develop something to play in this space.

G

General Mark D. Kelly 49:46

Yeah, no, thanks, Valerie, appreciate it. There's other companies that have solutions to our AMTI requirement. I'd appreciate they'd send me an email or if you know of them, send me an Because I don't know of them. Right now the Wedgetail is only the field and improving capability we have as far as airframe capability and fuse mission system in the mission system is Northrop Grumman product. That's the only one that that I'm aware of. And so my gut feel is and again, I'm going to differ from my requiring expertise that I give our acquiring experts to them as far as the specifics of the RFI they send out to industry in general. But right now I'm not aware of another solution for air domain awareness that can be rapidly field in the time horizons we need.

L

Lt Gen (Ret.) Dave Deptula 50:48

Okay, let's, let's go to Pat Host from Jane's



P

Pat Host 50:53

hose from Janes. Hello, sir. Hey, what about this Advanced Tactical trainer that you want to buy? Can you not do with the T seven? Why don't you just buy more T-7s?

G

General Mark D. Kelly 51:08

Yeah, well, first of all, there may not be a capability gap. And there might not be anything that we need to do. But the flipside is, there might be other industry solutions either added to the airplane that exists now or frankly, a completely new airframe. And so you're absolutely right, it may be able to fill most of our needs. But the deer swing going from training to fighter training, will unambiguously generate a size weight and power requirement because we're not just going to take off and land is which are key key parts of every mission. We need to make sure our our landings equal our takeoffs. But the other piece of it is, is there'll be I expect there'll be an increased demand for sensor capability, whether that be small radar, small jammer, there'll be I expect, I don't know, but I expect it to be increased fuel requirement for mission duration, and afterburner use, I expect there to be at least a nascent small weapons computing capability on there, at least for a aim nine IR missile capability, and some simulation playback that either has real or simulated, or constructed threat awareness, all of those drive requirements, there weren't in the original T seven, you know, statement of requirements. And so it's not a criticism of the T seven, they built what they were designed to build, but it may or may not fit, the demand of going from flying to fighting, because they're a different avenue. They just happen to take place in the same space.

P

Pat Host 52:46

Real quick, the Navy wants a new tactical surrogate aircraft trainer themselves, would you be open to a joint program for this?

G

General Mark D. Kelly 52:57

I'm, I'm never averse to work in or talking with the Navy. But I can't tell you I'm not familiar. I apologize with exactly what they need and mission wise. And so the folks who work for me and the folks who work up in the Pentagon work these requirements. I'm sure there'll be squint with their ears and what the Navy is doing or not doing. If it fits what we're doing will obviously look to me with him if it doesn't work for what we're doing. I mean, we've seen across the history of our two services. I mean, there's a reason why we both feel that fourth gen air superiority they bought their 14 We bought the F 15. It wasn't because there was different huge differences and what we need to do, but there is differences in how we do business. And so I apologize, I can't give you a better answer than that. But we'll team with them where we can, like we do with the F 35. And we won't team with him if we can't compare to the F 15 and F 14. Thanks.

P

Pat Host 53:49

Thanks.

L

Lt Gen (Ret.) Dave Deptula 53:52

I've got a great comment on F-14s But I'll save it for off the off the record Brian Everstine.

B

Brian Everstine 54:02

Yes. Thank you. It's Brian every time of their Aviation Week. Um, I will had a quick question going back to engines. Earlier this month the DOD IG had a report out auditing F 15 and F 16 engines have depots and said that there's a shortage they're expected to last until about 2024 Can you say how this has impacted your operations?

G

General Mark D. Kelly 54:23

Brian thanks for the question. And I I spend as much time I've met with I spent a whole week with General Bunch of AFMC and I just got off a video teleconference with General Bunch. And we stay closely lashed at the hip on all things sustainment all things depot whether it be our engine depot component depots are our main depots at Ogden Tinker and Warner Robins and so thanks thanks for the question. Right now today as I see here, we're we're meeting all of our requirements with our engine supply chain and most of our engine supply chain that you probably know goes to tinker. That's my fact, I visited there recently to talk with the great airman airman meaning our civilian contractors in GS and our uniform. But specific to the F 16. F 15. Engine. I know there's pressure on the system right now are meeting all of our demands. But I but I'm not surprised one bit. If there is pressure on the supply system into 2024, I would frankly be surprised if there wasn't pressure beyond 2024. Or right now today's I see sit here we do not have, for example, holes, my cab impacts to our F 16 F 15. Fleet. But we do have significant pressure, we do not have a overwhelming number of spare engines the button that would be pressurized even greater into a high paced kinetic fight.

B

Brian Everstine 55:50

It seems like there's pressure on quite a few fronts. We've talked 35 Just talk 15 16. If it does go to 2024, what sort of methods steps can you do to make sure you don't run into these sorts of shortage issues?

G

General Mark D. Kelly 56:03

No good question. I frankly, I think, Brian a better example, is to is really more of my AWACS fleet, my AWACS fleet operates TF 33 engines and those TF 33 engines are also used in J stars. And they're also used on the B 52. Not to go into too much detail, but the engine and term the TF 33, shares the same core fan turbine module. Some of the other components, fuel fuel controllers, and things like that are different. But the short story is that TF 30 threes are my greatest pressure point right now, on my AWACS and J stars fleet. When I take when my team takes an airplane, from one side it Tinker to the other. What I mean by that is from the flight line of the 5/52 air control wing, to the Depo at Ogden, which isn't exactly an eighth of a mile away. Before those engines cool down. Our technicians are removing the engines to cannibalize them to take back over and put engines on the fleet that is high, high pressure on the sustainment system. And we have not manufactured these engines from Pratt and Whitney for many, many years as you might expect. And so to manufacture parts or to find parts is a 24/7 business. That's that that engine in that supply chain consumes a lot more my time and energy and concern than the F 15 F 16. Line. But if we got to do a shooting fight, and we had to double or triple our story rates, which means we double or triple ours, our hours on the F 15 F 16. Fleet, we would have to ramp up in terms of material and shift work to keep pace with that demand. But we've done that before. And I'm pretty confident we can do that. Again, I'm not losing a lot of sleep over the F 100 series engine. Thanks.

L

Lt Gen (Ret.) Dave Deptula 57:55

Okav. General Kelly. we've aot one here from one of our Air Force fellows here at the Mitchell Institute. Lieutenant

Colonel Josh Holaday. And here's his question, sir, you spoke about having to have ACE to win a future fight. Do you foresee the need for a better defined and exercise tested command and control relationship? Between a deployed ATF commander and the mobility tanker forces that are required to enable ace maneuver and supply does their combat command need to focus some of his exercises to include AMC transcom and figure out the logistics side of Ace?

G

General Mark D. Kelly 58:35

The short answer is yes. And the other answer is we're already doing that. The other the other thing I would not just ACC focusing with AMC because it does generate new supply chain challenges when you when you distribute your force in a very unpredictable for the enemy predictable for us fashion. You obviously have now have a new distribution in theater challenge. That's why I mentioned earlier what we've seen with our hc 130s Which obviously their main mission is to do rescue but if they're not busy doing rescue, they're phenomenal capability to deliver airmen in parts and pallets and they they're pretty darn good see C2 node with its organic calm, but the other folks we need to coordinate with is AF SOC. Our special operators have a unique skill set for showing up somewhere low signature. They're by definition multi cable airmen very professional and help us with getting in and getting out of a spot and refuelling and rearming. But to Josh's question, we are working pretty well with AMC, we do recognize the logistics challenge and a C2 challenge. The biggest C2 part that I'm working right now is we physically just don't have enough combat calm to go around a major pacing theater with with enough calm to do the C2 that we need. And so we're working Pretty hard along those lines, but I'm happy for Josh to reach out our fellows if we need to help him out, round out some of his questions. So thanks.

L

Lt Gen (Ret.) Dave Deptula 1:00:09

Ladies and gentlemen, unfortunately, we've come to the end of this Aerospace Nation event and I'd like to offer a big thank you again to General Kelly, and from all of us here at the Mitchell Institute. Have a great aerospace power kind of day.