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**Doug Birkey:** [00:00:00] Welcome to the Aerospace Advantage podcast. I'm Doug Berkey. 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, thanks so much for joining us. And 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 most to you.

This week, we're really excited to welcome Lieutenant General "Grynch" Grynkowich to the podcast. He's currently serving as the 9th Air Force Central Command Air Force Commander. And as everyone has seen in the news as of late, that's a really busy theater with some major threats in play. But big picture, Grinch is one of the top airpower leaders in the Air Force.

Not only did he rise through the ranks flying F-16s and [00:01:00] F-22s in some of the service's premier units, but he was also appointed by the then Chief of Staff, General Mark Welsh, to lead a foundational study helping define future requirements for the air superiority mission. The effort was termed an Enterprise Capability Collaboration Team, or ECCT for short, and several others followed.

In fact, the next one focused on multi domain command and control, and was led by a then one star named "Salty" Saltzman. So yeah, what Grinch kicked off was an unbelievably impactful effort. Not only did his effort lay the groundwork for the Next Generation Air Dominance Program, but the ECCT model morphed into the Air Force's Futures office.

Now ever since then, he's been in key roles and we've really enjoyed watching him grow as a leader in the service. And point blank, he's a key reason why you should have confidence in today's air force. People like Grinch are who make the air force what it is.

Now joining me for today's conversation is our very own Lieutenant General Dave Deptula. Sir, always great to have you here. [00:02:00]

**Lt Gen David Deputla:** That's great to be here, Doug.

**Doug Birkey:** Okay, with that, General Grynkowich, we can't thank you enough for coming over to chat with us today.

**Lt Gen David Deputla:** Yeah, John Grynkowich, it is always a pleasure to catch up with you and really appreciate your time, given all that's going on in your theater of operations.

**Lt Gen Grynkewich:** No, thanks, sir. And thanks Doug. I appreciate the opportunity to come and speak with you. You know, it's been a couple of years in absent and I'll be leaving the position here pretty soon. So a great opportunity to come back and have a discussion with you.

So again, thanks for the opportunity.

**Lt Gen David Deputla:** Well, super Grynch, let me kick this off by asking if you could help our audience understand just what's going on in the Central Command area of operations. I think, most are pretty much clued in to the fact that Iran is central to the malign activity occurring in the Middle East right now.

Could you share your perspectives with our audience by describing the threat environment you face? At a strategic level?

**Lt Gen Grynkewich:** Yeah, you bet, sir. So a couple of [00:03:00] thoughts. I think we have to go back to the 7th of October to understand what's really going on in the region right now. And, you know, just like other key events that have happened throughout history.

We can't go back to an error before the 7th of October and think that things will return to the status quo antebellum if you will. So, on the 7th of October, Hamas, a horrific terrorist attack. It's been well documented and talked about a lot, so I won't rehash it here, but that really helps you understand and frame how the Israelis have responded to that. And obviously they've had operations ongoing in Gaza for some time now, several months as they've tried to take on their military task of getting their hostages returned and destroying Hamas. So as that conflict has evolved, actors in the region have tried to take advantage of it.

And you mentioned the one that's key to most of the issues that we see in the region, and that is Iran. In my view, Iran has no actual care for the plight of the Palestinian people. They're just a malign actor that is seeking to take advantage of a situation to further their goals of regional hegemony. To push the United States and other coalition [00:04:00] partners out and gain the upper hand there.

So, you know, that, that is the main driver right now, whether it was militia attacks on our forces in Iraq and Syria. Whether it's some of those attacks that we've seen coming from militias across the region against Israel, whether it's the Houthi challenges down in the Red Sea, Iran is the common thread behind all of it.

**Doug Birkey:** Sir, you know, it was never supposed to be like this. We're going to draw down operations in Afghanistan, Iraq, which would allow us to focus on other priorities, especially in the Indo Pacific. Expanding the lens a little bit more, what happened? Obviously you talk about some opportunism, but what are the other variables when you look at this?

**Lt Gen Grynkewich:** Yeah. So, you know, I think there is a good news story that we'll probably start to realize as time continues here, and that's that we did reduce our posture, both in the air component across other components in CENTCOM pretty substantially, particularly after the withdrawal from Afghanistan. And we continue to adjust it.

And we got to, you know, what I would describe as a minimum sustainable posture that allowed us to meet our objectives. And the theory in the National Defense Strategy is that if required, we [00:05:00] could surge capabilities back into the region, to deal with whatever was there, and that would both assure our allies and deter our adversaries.

And broadly speaking, I think we've succeeded. There certainly have been ups and downs, but in this current crisis, very rapid response almost doubling the combat power that Air Force Central had, for at least a couple of months afterwards carrier strike group in the region now that we have access to as the air component for uh, some of our air operations.

So we have surged capability back into the region. It will be there as long as necessary to meet our national objectives. And then we'll go back to our steady state posture again. But if the threat requires it, we can come back in. So, I think there is a good news story here that the general approach for the Middle East that allowed us to, um, become a theater that did not take up all of our time.

So we could focus on longer term, more existential threats like China. It is working and has been effective.

**Lt Gen David Deputla:** Let's talk a bit about capacity. Back during the Desert Storm air campaign, we had so many combat aircraft that we once planned 72 F 16s [00:06:00] to attack just one target. Today we have less than half the combat air forces that we had then.

And now, we're forced to stretch an air force that is arguably adequate for just one major regional contingency. But across Europe, Central Command, the Pacific, missions we often don't read about in Africa and South America, not to mention Homeland Defense. Five years ago, then Secretary of the Air Force, Heather Wilson, commented that the Air Force is too small for what the nation expects of it.

Unfortunately, the Air Force has gotten even smaller since that time. Now, we had the Air Force programmer with us recently and he reaffirmed all of that. How does this situation in terms of capacity affect you at the operational level?

**Lt Gen Grynkewich:** Yeah, so that's a great question. I do have a lot of the similar concerns that you have, and I know senior leaders across the Air Force have concerns about what is our overall capacity.

And, you know, the last time I was in D. C. for an [00:07:00] assignment, I worked for a period of time in the A 8 and worked on the long term Air Force strategic plan. And there's a constant trade off that you're making between capability development, making sure that you have the right types of things.

And then there's the separate calculation of how much mass do you need of those right types of things. So, so in my mind, there's a balance that we've got to be able to address and find, you know, on the one hand, I absolutely agree that the Air Force needs to modernize.

We need to modernize quickly, but we also do need a particular amount of mass. We'll need that mass for conflicts in the Indo Pacific, for conflicts in Europe, for conflicts in the Middle East. And we'll need that mass just to meet combatant commander needs steady state around the globe. So, I do think there's a growing awareness that capacity limitations affect us.

And this is across, you know, a wide range of capabilities, whether it's joint fires provided by the fighter and bomber force or Intelligence, surveillance, and reconnaissance. That is always a capability that's in high demand and never enough density, whether it's low density or not. So I think we do have to pay attention to [00:08:00] capacity.

What... Our Air Force cannot become a regional air force that can only focus on one part of the globe. We've got to be able to maintain our status as a global proponent for air power.

**Lt Gen David Deputla:** Well, speaking of demand, we're seeing adversaries collaborate and coordinate in very opportunistic ways. They know how to pressure us by spiking demand signals around the globe in ways that we just simply can't ignore.

So how do you think the impact of this new axis of evil being manifest today relative to our force sizing decisions, and how do we consider smart security strategies for the future?

**Lt Gen Grynkewich:** Yeah, sir. So this is something that I've spent a fair amount of time thinking about in this role, and it's really been in a context of seeing the confluence of those those adversaries that we identify in the National Defense Strategy come together and start working together.

So, you know, the PRC is the as our pacing challenge certainly has designs and is trying to make inroads in the Middle East. They benefit from the sale [00:09:00] of or from the purchase of Iranian oil that then benefits the Iranians. And so now they have additional cash flow. We also see the very tight industrial relationship that's growing between Iran and Russia with the selling of Iranian UAVs and missiles and tech transfer going back between those actors.

And even North Korea is in the game. So as those adversaries come together and start cooperating and collaborating, you know, it goes a little bit back to our last question. We can't view any particular threat, as just a regional actor, certainly China in and of itself is a global problem that demands global solutions.

And for us to think about it on how we counter them and compete in that global space and really beyond the globe, you know, all the way out to geosynchronous orbit, I would argue, or perhaps beyond at some point. So we have to think about, how do we counter these threats globally? And as they start working together and cooperating together and collaborating together, you know, we often talk about our allies and partners being our strategic center of gravity.

[00:10:00] My guess is they see things in a similar way and I don't want to mirror image here, but they certainly benefit and see the benefits of working together, challenging us on multiple fronts at the same time. So that speaks to the capabilities and capacities that we were just talking about as well, and how we've got to make sure we get the right balance there.

**Doug Birkey:** Yes, sir. Pulling the thread here a little bit more. You know, there's another factor and that's really with credible deterrence and you're referring to that a bit here, but we obviously don't want to fight when we can secure desired effect short of conflict by shaping adversary decision making. And we've argued the amount of conflict in play around the globe right now would indicate we're struggling on that front.

How do you see it?

**Lt Gen Grynkewich:** You know, deterrence is always something temporal, and it is a, if you'll allow me to lean on my time, it's a J39. It's a cognitive outcome, right? It's a perception that the adversary has that the costs of whatever action they're about to undertake are not worth the benefit that they would gain from it.

So, you know, from my perspective the expansion of warfare to below a [00:11:00] threshold where you're able to deter where, you know, you can't, we're not in the era of mutually assured destruction any more. The tools of warfare and statecraft are much more subtle and it's very difficult to deter things below that level.

So, what that drives is a level of escalation. If you want to deter, you've got to show that you're willing to respond in a way that goes up the escalation ladder, a rung or two. And that can go back and forth for a few rounds. And now you get to the point where you're really concerned about approaching the edge of conflict.

So I think that's the fundamental challenge that we have. When you get out of the realm of nuclear deterrence and you're talking about conventional deterrence, that's a challenge. So the solution that the department has come up with, which I think is a reasonable one, is the concept of integrated deterrence.

Not just using tools of military power, but using the whole panalopy of things that's, you know, that we have at our disposal across the whole of government. To try to drive those deterrent effects for actions that, again, may not rise to the threshold of open conflict. There's a lot of other tools in the toolkits.

Military is absolutely part of it. But it's not the only one.

**Doug Birkey:** I appreciate [00:12:00] it.

**Lt Gen David Deputla:** A bit of a follow up Grynch. What are your thoughts on, and I know it's a, real complex answer, but a couple of highlights on how do we deter Iran and you know, some of us think that maybe some of its proxies like the Houthis may not even be deterrable. So while there's no easy answer, what shapes their decision calculus?

**Lt Gen Grynkewich:** It's a, that's a great question. I think in many ways it is that calculation of cost versus benefit that I described in my previous answer and the Iranians have, they're one of the countries that has done a reasonable job at building unconventional deterrent capability themselves against us and unconventional ways of escalating in a deniable way that causes us challenges as we seek to deter them.

And those proxy groups are one of those key capabilities. The others is their ballistic missile force which is substantial. Thousands of ballistic missiles that they have that are very accurate and very lethal. [00:13:00] So when I look at that problem and I think about, you know, how do I deter Iran itself?

I think you can rest a lot of your laurels in a conventional deterrence basket. The idea that we can bring overwhelming combat power into the region if we need to and that Iran and we see it that Iran does not want a conventional conflict with the United States or with our allies and partners. They're not looking for that right now.

As for the proxies, they are difficult to deter as individual groups. The key in my mind is maybe not deterrence, but compellence. What I want to do is shift the calculus from, say, one of the militias in Iraq trying to if the costs are worth it or not to, Iran making the decision that they're going to withhold support and they're going to, you know, pull on the choker collar of that particular group.

And I think we saw that successfully in the aftermath of our strikes on the night of February 2nd to 3rd after the fatalities that we took at Tower 22, when three army soldiers were unfortunately killed by a one way attack drone on January 28th. [00:14:00] So, the strike that we did obviously, it was a much larger strike than previous ones.

Eighty-five different targets that we hit. And it also the nature of those targets was different. So it was no longer just militia groups, but it was also things that were of interest to the Iranians. IRGC facilities, for example, Iranian Revolutionary Guard Corps facilities. So that reset what Iran was thinking.

And Iran realized that their support for the militias was actually putting them at risk and not, you know, they'll fight to the last militia member. Now, just shifting really briefly to the Houthis. I think it's very difficult to deter the Houthis. They are most likely a rational actor in some way, they understand cost and benefit. They see a lot of benefit of what they're doing right now.

And so to impose a high enough cost to deter them is going to be really difficult. So our approach is actually not deterrence, our approach is to remove capability from the battlefield. So they'll be unable to threaten maritime shipping or other interests that we have in the region.

**Lt Gen David Deputla:** It's great to hear that last part, because I think that's exactly what needs to happen. [00:15:00] Over to you, Doug,

**Doug Birkey:** You know, sir, we talk about it all the time. The air force is in the middle of a massive reset and you were obviously part of that and your role is the air superiority E C T lead. And I think two factors really set this era apart from others. You know, first the diversity of threats.

We've got everything from peer competitors with Russia and China. Exceedingly capable nuclear and ballistic missile focused mid tier threats with North Korea and Iran. And then further down the line, you've got non state actors. They continue to be a major destabilizing force in treaty regions. And, you know, add the homeland threat to all of this.

It's under risk, like we haven't seen in generations. And it demands sophisticated systems and capacity and even more on it. You've got space and cyber entering the fold as domains that demand a lot of attention here. And the second part is it's all happening at the same time. You know, in the past we could really focus on a major threat and take risk elsewhere.

And that's what we [00:16:00] did for a lot of the Cold War. It's what we did for the last 20 years in Afghanistan and Iraq. Now it's this overwhelming concurrence geographically the scale and scope of challenges and everything demands attention at once. And you really can't choose between Ukraine or what's going on in the Red Sea with the Houthis or Chinese aggression in the Pacific.

We've got to do it all and I'm just curious, how do you see the scale and scope of the threats impacting the capabilities and capacity we need? In the modern force design, kind of looking to what's coming next.

**Lt Gen Grynkewich:** That's a really, really complex question and one that requires a fair amount of thought.

First, thanks for bringing up the ECCT again. In my mind, that seems like just yesterday, but I think, you know, that work is not quite a decade old now. But a lot of the concepts that we initially started, even though some of the substances changed, I think, generally conceptually, we were on fairly firm ground.

And one of the things that we said back then was your overall force design does need to be adaptable. So, you know, if I look at alternatives to, to force design, we certainly have to focus on the [00:17:00] pacing threat of China. We certainly have to focus on the acute threat of Russia and we have to be wary of actors like Iran and North Korea.

But historically we've been very poor at figuring out where the next conflict is going to be. So I just keep that back in the mind. You know, I'm an historian by training and college and grad school. I always, I try to avoid the hubris of thinking we know what exactly is coming next.

So one of the key attributes that I look for in any force design is adaptability and ensuring that, you know, if we build something that is capable against you just one particular set of threats that's out there, then the paradox of warfare is wherever you are strong, the enemy will not strike. They will strike where you're weak and they'll think about how to adapt what they're doing to your particular weaknesses and avoid your strengths.

So, adaptability is a key attribute that I think we've got to build into that overall force design.

**Lt Gen David Deputla:** Grynch, pulling on that thread a bit more, how do we ensure the balance between the 'fight tonight force' with tomorrow's challenges and imperatives? For example, MQ 9s are key systems that [00:18:00] we're using today and they will be for years.

Collaborative Combat Aircraft are clearly an important priority for tomorrow. And I can say the same about F 22 and Next Generation Air Dominance or B 1s and B 21s. How do you see this? Because you've lived in both worlds.

**Lt Gen Grynkewich:** Yeah, absolutely. So a couple of things that I think. First is we do have to make the investments in those technologies that are not fully developed that are at a lower technology readiness level and drive.

Some of the capability development for the long term. As those capabilities start to come to fruition, though, as you start to build prototypes, as you start to build, you know, your initial capabilities, I think there's a space that we haven't exploited enough, which is how do you apply those new technologies in tonight's fight?

If I look just at the Ukrainians, you know, there is no crucible like warfare to drive innovation to drive it at speed. And the way the Ukrainians have adapted to the modern battlefield, the way they've had to adjust what they're doing from an air defense perspective, from an [00:19:00] offensive perspective from a data centricity perspective of ensuring that they can hit targets very quickly.

All of those things are advanced technologies that were developed and brought to bear very quickly. So I think there is a space where you can take. An area of operation like we have in the CENTCOM region, you could bring capabilities as they're starting to mature and you could try them out in an austere actual combat environment and see how do they actually perform?

Do they live up to the glossary brochure or do they live up to the promises that we saw? I mean, no better place to do operational tests than in actual operations. And of course, you've got apply some reason and logic to this and use them at the right level of risk. But I think there is some space there and even with older technologies like the MQ 9 you know, the MQ 9 will be around for years to come depending on, you know, where the next conflict is and when it erupts, it'll be a key part of that conflict. Using the MQ 9 the way we are using it now down in Yemen.

Defined Houthi threats in a higher threat environment is entirely different than when we're circling overhead, [00:20:00] looking for a particular at a particular terrorist compound, trying to figure out if the individual, the high value target that we want to hit is there. It's a much more dynamic environment. So you're investing in the development of the force from a human perspective by exposing them to actual combat operations and making them think through, forcing all of us to think through the skills that we would need in a much more lethal and rapidly paced conflict some point in the future.

**Lt Gen David Deputla:** Yeah, I know. It's great to hear you say that. And then I would just add from a historical perspective, the air force has done that before. And we introduced a J STARS into Desert Storm while it was still, you know, going through some of its checkout and a well before it was declared you know, mission capable and some of us, offered that same idea I can remember as the commander of Northern Watch , in 98, 99 letting the Air Force know I'd be happy to use Northern Iraq as a testing ground for the then very new Global Hawks. But they didn't take me [00:21:00] up on that.

**Lt Gen Grynkewich:** Yes, sir. If I could just add that, you know, we do have some success with that today. We are trying out um, long endurance aircraft up at altitude and doing some real world operational testing.

We've done some testing on high altitude balloons. A lot of that's been with our task force 99 and you know, it's still the mindset I think of much of the force and much of the development community in the air force that they see the value in taking that approach.

**Lt Gen David Deputla:** What's good to hear. Let's move to a different domain. And I wanted to ask you about how you're integrating with the Space Force. Clearly, they bring a lot to the table that you need every day. Whether that's from weather. to comms, to ISR. So how's that working from an organizational perspective, as a Space Force integrates at the COCOM level?

**Lt Gen Grynkewich:** Yes, sir. Yeah. So, um, You know, CENTCOM stood up Space Forces Central a while ago in conjunction with Space Force. I think it's been about a year ago now. Don't quote me on the date, but that has been a [00:22:00] really successful endeavor in my view. And as you know, the Combined Forces Air Component Commander has typically been the space coordinating authority.

Transferring that authority over to the Space Component Commander has been a win, I think, for CENTCOM. So, it gives, to have direct access to the space force commander at the combatant command level. And this started when I was the J3 at CENTCOM, so I'll maybe speak to it a little bit from that perspective.

It just brought into sharp relief some of the space capabilities that we depend on every day as a joint force. And the fragility, the resiliency of those capabilities. and I think again was a big win in just raising the awareness of the entire joint force on, what exactly we were doing in space and what we needed to have a shared access to in space. At the tactical level, you know, one of the fears I would have had, had I been the air component commander at the time, would be that we were going to force apart the Space Force and the Air Force and lose some of the synergy that we had.

Particularly in the CAOC, which is, you know, the Combined Air Operations Center is what people usually say, but it's the Combined Air and [00:23:00] Space Operations Center still today. So Space Forces Airmen from Space Force Center sitting in the CAOC on the Combat Ops floor every single day fully integrated into our processes, fully integrating into our functions.

And truly it is a combined and joint environment in that facility with the Space Force and with a lot of other services and nations as well.

**Doug Birkey:** So, sir, how do you see China and Russia impacting Central Command? I mean, whether supplying technology or pulling strings with their adversaries.

How's it playing out and what does this mean for future threat dynamics?

**Lt Gen Grynkewich:** Yeah, really interesting and very different answers for each of those countries. So on the Russian front, you know, I've talked before about the challenges that we had with Russians contesting the airspace over Syria.

They're not really doing that right now. I've talked before about how Russia needs to get back to focusing on ISIS. They're not really doing that right now either. So, I see a, substantial change in Russian behavior in the region. Their core interest is securing access in Syria, so they've got a platform, [00:24:00] whether it's a warm water port in the Mediterranean at Tartus or whether it's a platform that they can launch aircraft from or have air defense capability and et cetera.

So the Russian activity remains something that we watch. And it's a concern. The bigger concern to me with Russia is not maybe the tactical, daily operations anymore, although it has been in the past. It is the the operational and strategic level confluence with Iran that we discussed a bit before. You know, as Iran sells UAVs and missile technology and missiles and UAVs themselves to Russia I worry, you know, the Russians are going to make those better and that technology is going to back cast to Iran and make the Iranian capabilities more lethal for us. So that I think is a big concern across the region.

China's a little different. So China is largely focused on their economic interest on their diplomatic efforts. You see them trying to assert themselves diplomatically with their so called brokering of the deal between Iran and Saudi Arabia to reestablish diplomatic relations. You see a ton of economic activity where they're investing in infrastructure and trying to, [00:25:00] you know, in effect buy off some of our allies and partners.

When we are unable for some reason to have our foreign military sales program move fast enough. The Chinese are there with open arms willing to sell something, but the Chinese relationship is transactional. And so if there is good news here is you can always count on the Chinese to be Chinese and uh, our, partners in the region, fantastic partners across the board, by the way know that when they invest in U. S. Capabilities when they invest in our U. S. Relationship, it's a long term strategic relationship and not just a transactional one. But last thing I would say with China, though, is,they are pushing the narrative that the U. S. is not committed to the region. This is despite everything that's gone on, despite the flow of forces that we've had in, despite our relationships, they'll undermine us at every turn.

And where their economic interests lie, their military interests will follow, in my estimation. They have some military forces in the region. They're not particularly effective at anything. You know, a Chinese destroyer was very near to some of the ships that have been hit in the Gulf of Aden, and they never responded to a single distress call.

[00:26:00] As opposed to what our coalition ships have done and U. S. warships have done in the region. So, you know, like I said, the Chinese are going to be Chinese, but it is a central element of the region that we are competing for key terrain with China in the Middle East right now. They want access to the hydrocarbons, they want access to the trade routes, they want access to come across the Middle East and get into Africa where they can get rare earth minerals and use for advanced military applications.

So, you know, they think it's key terrain. I think we ought to think of that as well.

**Doug Birkey:** That Russian downturn. Is that just because they're saturated with Ukraine or did they achieve what they wanted?

**Lt Gen Grynkewich:** Yeah, I certainly don't think they've achieved what they wanted. I honestly don't know what to attribute it to right now.

You know, commanders change out they're fairly regularly. They've got some new folks there. There are still Russian commanders who were failed or were fired from Ukraine, as is often the case, and I've talked about that before, but the change in their operational pace, it's difficult to come up with a single reason for why it's happened. But it's very evident that it has.

**Lt Gen David Deputla:** Grynch, we're also [00:27:00] seeing other nations in the region significantly modernize their air arms. You know, there are also some U. S. policies driven by the State Department, and specifically here I'm talking about the Missile Technology Control Regime that often drive our friends into the arms of our potential enemies to procure UAVs.

Could you shed some light on what countries in the Mideast are buying and what this means for the kind of air power you might expect to see in the region 5 to 10 years from now?

**Lt Gen Grynkewich:** Yeah, you bet. So, as I talked to our allies and partners and, you know, they're very open with me about where they see their gaps and where they, where they see their force development in the future.

I'll go back to one thing we talked about a minute ago, which is space. Many of the countries in the region are very interested in advancing their space capabilities from a military perspective and trying to figure out what the model is for a Space Force like entity, whether it should be part of their air force, separate service, part of a different force et cetera.

So [00:28:00] having Space CENT on the docket and being able to make the rounds and talk to our partners has been very valuable to help them frame that out on how they develop their force. From a air perspective there's probably three or four main areas that many of our partners are interested in.

The first, I would say is unmanned technologies. So, many of them are interested in that. They've seen us use them to great effect. Some of them want things like MQ 9s that are remotely piloted. Others are looking to find affordable mass beyond the MQ 9. Things that are more autonomous maybe smaller but still long range. So there's a lot of interest in UAV technology and you see that at the trade shows that you go to across the region.

The second thing is just advanced fighter aircraft. Many of them are very interested in 5th Gen capabilities, and there's a lot of dialogue that's going on. I can't get into all of the specifics about what countries are talking about.

About it with us, but many of them are interested in things like the F 35. And so, that's a major focus area. They recognize the value of that 5th Gen capability.

They're also focused on air domain awareness and just building that awareness. So, radar [00:29:00] systems and other detection capabilities. So they can more assuredly maintain sovereignty over their borders.

And then the last one that's a little bit out of our wheelhouse but that is in the wheelhouse of a lot of the counterpart air forces in the region is ballistic missiles. So because they see the Iranian ballistic missile threat and they see the challenge of those long range fires and defeating them, they're looking for a symmetric way to counter that.

And so there is some interest in that kind of missile technology or long range artillery at the very least as a as a conventional deterrent capability against Iran.

**Lt Gen David Deputla:** Yeah, well, thanks for that. And you mentioned 5th Generation. The F 22 and the F 35 have deployed to the theater over the years.

Could you speak a bit about what they bring to the fight that's unique? You're a Raptor pilot, any positive surprises in how you've seen today's crews employ the jets?

**Lt Gen Grynkewich:** Yeah, so we did have F 22s and F 35s come in. Over the last year, [00:30:00] particularly back in the June, July timeframe, when we had a lot of challenges with the Russians. You know, the Russians were flying a Su 35, a very capable 4th Gen aircraft that, you know, as we're flying up in the Syrian airspace, we're focused on defeating ISIS.

So we're in air to ground configurations. They're in air to air configurations. And it, um, it caused us a number of challenges. That challenge goes away when they come beak to beak. With an F 22 or even with an F 35. So the ability of the Russians to even know that the platforms were there given their stealth characteristics.

You know, Russian attempts to outmaneuver an F 22 were entirely futile. Russian attempts to lock on to an F 35 were futile. So they very quickly backed down. So it gave us away, even though it wasn't you know, actual kinetic. combat. It gave us a way to push back on the Russians and show them that they had reached the limits of their influence when we were able to bring those advanced capabilities in.

So just just fantastic capabilities.

**Lt Gen David Deputla:** Yeah, I know. That's great to hear. [00:31:00] Um, and I think it underlines the importance of those kinds of airplanes and that kind of capability. And we could talk about that for an hour, but there are a lot of people that are drawing what I believe are inappropriate lessons out of the Ukraine Russia fight.

We're going to need to be able to operate across the entire spectrum of conflict. And what the Ukrainians have to do is very different than if the United States gets involved in a major regional contingency.

Um, back to your AOR, where we're also seeing stalwart aircraft like the MQ 9 continue to execute lots of missions in the shooter sensor realm and increasingly the sensor effector realm.

Could you help us understand what daily ops look like for these folks? And why this capability is still very critical.

**Lt Gen Grynkewich:** Yeah, absolutely. I mean, we use the heck out of the MQ 9 and those crews have performed magnificently [00:32:00] during my time in the AOR and doing a wide range of diverse missions.

So, you know, everything from keeping an eye on ISIS and some of the roles that we've seen use for the last decade or so for the MQ 9. To now being part of a layered sensor collection plan for self defense targets in Yemen, things that are going to affect maritime shipping.

So, on any given day an MQ 9 pilot might find themselves launching an aircraft to fly up on a De-ISIS mission in Syria. They might find themselves on a force protection mission in Iraq or they might find themselves diverted down into Yemen to look for Houthi capabilities and frankly, what is not a fully permissive environment by any stretch. And other times we use them very heavily in support of the naval component and the maritime component and they'll go out and help with maritime domain awareness. Help with overwatch of ships as they're sailing around or keep an eye on Chinese activity in the region. So, there's a host of different missions that they're doing.

It's very, you know, if you think about it from the air crew perspective for those who have flown, you [00:33:00] know, that their daily special instructions, there's particular ROE for each of the operations that are ongoing in any AOR. Those MQ 9 pilots have to be able to flex and shift and adjust. And, you know, the crews, the sensor operators have to know what are the priorities for collection and tasking from side to side of the AOR as we flex on one way or the other. So they've done magnificently, they absolutely are crucial and we're learning a lot together with them.

**Lt Gen David Deputla:** Well Grynch, what about command and control? Back during the Desert Storm air campaign days I did all the Master Air Attack Plan designing on yellow legal pads with a pen, not even a computer. That obviously morphed to the massive software and computer systems we have today. Where do we stand on moving to the next generation of command and a resident in ABMS and CJADC2?

**Lt Gen Grynkewich:** I think the 609th AOC and the overall CAOC that layers around that and on top of it is probably [00:34:00] a doing some of the most leading edge work in this area. So I'll highlight a couple of key areas. The first is in our ability to do distributed operations. So the software applications that we have today, we've really moved beyond these large burdensome programs of record that get updates every so often to something that's much more akin to how you get updates on your iPhone.

And the applications that we use to build the master attack plan or to build any facets of the ATO are much more agile much, they would be much more familiar to someone who grew up with an iPhone than to someone who grew up with C2 BMC. If you will, if the command and control battle management system that we've used for a long time.

So that's kind of step one. The other really neat thing about this is these applications increasingly live in the cloud. So we have done distributed execution of ATO production and ATO dissemination of the air tasking order from apartment complexes where we're able to tunnel into the wifi, get a secure connection and push the ATO across the entire AOR.

So talk [00:35:00] about resilient command and control when you can access what you need to from any location and get that going and get it out to the force. You're in a much better place. So that's kind of point one I'd make.

The second thing that I think we're making huge strides on is the data centricity of our targeting process.

So using a number of advanced applications in coordination with CENTCOM and the other components. Using the back end of the Air Force ISR enterprise, all the ISR wings that are in 16th Air Force we have really amped up our ability to get back to targeting at scale and speed. So one of the challenges that I gave the team is, hey, I want to be able to do a thousand targets a day, because if we get to a major combat operation and CENTCOM or anywhere else that's the scale of the lethality that we're going to need to be able to impose on someone.

You're not going to be able to do that with a number of people we've got unless you have the algorithms, the machines doing a lot of the work for you, unless you have the right systems that can optimize your workflows, et cetera. So data centricity and distribution, I think, are the key factors that I see.

And we're making huge [00:36:00] strides in them. We're using them in combat every single day. We're exercising them at higher and higher scales and making tremendous progress.

**Lt Gen David Deputla:** Well, thank you for that.

**Doug Birkey:** So, sir, we've touched upon this in various parts of the conversation, but what are you seeing today in your theater? When you think about, you know, what we should be tracking in terms of key trends and developments that will fundamentally shape tomorrow's threat environment and the kind of challenges tomorrow's airmen are going to face.

**Lt Gen Grynkewich:** Yeah. So I think we see a lot of things that indicate what the future is going to be. It's almost like a peak underneath the curtain. And you know, if I had been talking to you about a year ago or even just six months ago, I think I would have said things like, you know, we can glimpse the future of warfare.

It is it's unmanned, it's digital. It's volume. It's complex attacks between cruise missiles and UAVs and ballistic missiles. Really complex attacks that come at you from any direction, and they're coming at you constantly at volume. And and I would say I think we've seen that play out in places like Ukraine.

I think we've seen it play out to a [00:37:00] degree with some of the attacks that the Houthis have done and that the militias have done in Iraq and Syria. So, if I export that you know, I often would tell people, if you're not worried about UAVs in your AOR, just wait a couple of days and you're going to be. They're cheap, they're affordable mass, and they're going to be able to come at you in volume and trying to figure out how to, A, be on the right side of the cost curve as you do force design and B, make sure that you have a solid command and control that is joint and combined, that's able to counter the threat, those threats is going to be essential.

So that's part of what I would take into the air force. You know, the one, one of the things that we do better than almost anyone is command and control and joint and combined command and control. Our air operations centers are absolutely central to that. The ability of me to fulfill my roles.

As the area air defense commander, synchronizing army capabilities naval assets coalition assets, our partner region missile defenses and our own air component assets. You could not do that without something a command and control node like we provide through our air operation centers.[00:38:00]

**Doug Birkey:** I appreciate that. You know, we talked a little bit earlier in the conversation about capacity and obviously joint and allied air power is a huge part of that. And we always need to look at that. You know, when you look at those players, how do they help you on the capacity challenge? Are there specific missions where they're useful?

Are there others where it simply takes U. S. Air Force air power where there's really no plan B? And obviously the Air Force is the only one really with bombers around. Um, how do you look at that?

**Lt Gen Grynkewich:** Yeah, so a couple of different ways. So I would say, um, for partners that come into the region from outside of it, a lot of them have very similar capabilities to ours.

A lot of them have advanced capabilities, and it's not just fighters. It's you know, their multi role tanker transport aircraft, some of their collection aircraft. And so we work to synchronize across those coalition partners with what are you bringing in? How does that affect what we need to bring in?

And what do we need to put in a request for forces to bring into the region and really leverage frankly, what are very similar interests for countries around the world in the [00:39:00] Middle East. Very similar to ours. And so, we can with some planning at the operational level, we're able to synchronize a lot more fully and take advantage of our combined capabilities.

Partners in the region are even a better story, in my view. Partners in the region, many of them, as I mentioned, flight fly U.S. Equipment. We've had U.S. training missions and many of them for years. We still do a huge number of partner nation integration events to try to build interoperability and common tactics, techniques, and procedures.

So at the tactical level, we've got a lot of commonality and we can work together for common defensive goals all the time. The real work is integrating now at the operational level and over the last several years, and it started well before my time, but we have really improved our air operation center to air defense and air operation center connectivity from our CAOC to all of our partner nations in the region. And been able to come up with really an integrated defense design for the whole place. And that I think has been a huge win and that allows us to have the approach that we have in the Middle [00:40:00] East to know that we don't have to have all the forces there all the time, just in case something happens, but we can be there partnering with them, integrating capabilities and supplementing when we need to in a crisis.

**Doug Birkey:** That's a huge learning curve. And I mean, you think about what General Deptula is describing with those yellow legal pads versus where you are now. I mean, hats off to you and your team.

**Lt Gen Grynkewich:** Thank you. It's a, it's an amazing group of folks that we've had. A lot of, professionals. You know, one of the great benefits to the U. S. Air Force, in my view, of the Combined Air Operations Center in Absinthe is it is a place, it is still probably one of the few places where you can come and get real world combat experience at the operational level. And the fact that we rotate people through every six months to a year. You know, there's some challenges with that.

I would like to have a more stable workforce, but there's some huge benefits to the air force that people can rotate through and fill these positions. And I'd tell you, our partners see it the same way. We are a coalition of about 19 nations doing various operations across the entire operation center.

And countries still send people there, even if they're with us. And they know that the priorities, the Indo [00:41:00] Pacific or they're more focused on Europe or whatever their priority is, they recognize that they can only get the experience they get, combat wise, at the 609th AOC in the CAOC.

**Doug Birkey:** That's huge.

**Lt Gen David Deputla:** And now, we'd be remiss if we didn't ask about air and missile defense, especially when it ties to base defense. You're seeing a lot in the theater. Could you describe how you're seeing the threat evolve and the types of capabilities that you'd like to see help address those threats from an air and missile defense perspective?

**Lt Gen Grynkewich:** Yeah, you bet. So, you know, as I alluded to the peak under the curtain at the future of warfare, UAVs, cruise missiles and ballistic missiles and having to worry about everything everywhere all at once if you will. I mean, that is a, that's a real challenge for us. So what we've had to build is a layered, integrated, defense design.

And that's both at the operational level and at the tactical level. So one of the great innovations that my predecessor, General Keough, started was what we called a [00:42:00] single room operation center. A place where all of the defensive capabilities of the base, all of the things that you would have in a wing operation center, a walker in your command post in your rescue operation, all those things kind of come together in one place.

And in effect, what I would argue we, we have done over the course of the evolution of several years of this is, we've created a TOC, a tactical operations center. You know, we're in the process as an Air Force of fielding TOC lights and getting those up to speed and deploying them.

We have had to build something very similar to that capability. Not as nearly as robust and not with the same volume of tasks that they can accomplish. But from a, base defense perspective, we have had to have that. So if you walk into one of our bases now into one of these op centers, you've got the folks who are operating the Patriot battery.

You've got the folks who are operating counter UAS capabilities like Coyote. You've got folks who have all the drone buster capability like our defenders. They're all in the same room and there's a combined and orchestrated response to any kind of incursion that's coming in. [00:43:00] That's a huge step forward, I think in our mindset of how we defend these bases.

**Lt Gen David Deputla:** Well, Grynch, um, we're kind of coming toward the end of our time. So, I thought I'd give you an interesting question. One that no one is going to hold you to depending on how you answer it. But if you had a magic wand and could get any sort of extra capacity or capability, what would it be right now? And think of this as a resource unconstrained question.

**Lt Gen Grynkewich:** Yeah, I'm mindful of that in my next job, I'll be answering requests for capabilities like this or providing recommendations on it. You know, I think the biggest challenge that any commander faces is understanding the environment and you can never understand it well enough.

You can never have enough information. So, my magic wand would, no surprise to you Gen Deputla, it would be additional capacity and capability and intelligence, surveillance, and reconnaissance. I think that's a key investment area for the Air Force both over the short term and long term. I think it's something that we absolutely are focused on as a [00:44:00] service and we ought to be because, you know, you can have the best fires capability in the world, the best maneuver capability in the world, but if you don't know how to use it or where to use it, it's fundamentally useless to you. So that's where I think a lot of our effort ought to go right now.

**Lt Gen David Deputla:** Yeah, well, knowledge is power. So a great answer. And unfortunately, we're out of time. Grynch, but we can't thank you enough for you being with us today. This has been an awesome rundown of your responsibilities as well as insights for the future So congratulations for an incredible job well done and all the best as you move on to the J3 position.

**Lt Gen Grynkewich:** Hey, sir. Thanks. I really appreciate that. You know just in closing I guess I'd say I appreciate you thanking me, but let me pass that thanks on to all of our airmen who continue to deploy in a selfless way, dedicated to service to their country, spending six months to a year away from their families and serving in the Middle East.

As I mentioned, it's a critical region for so many different [00:45:00] reasons. And they're all over there getting the job done for us every single day. So tremendously proud to have been a part of the AFSEN team and the CENTCOM team for the last couple of years. And looking forward to the next challenges.

**Doug Birkey:** Sir, just to add my appreciation to it. Always awesome to spend time with you. Thank you.

**Lt Gen Grynkewich:** Thank you, Doug.

**Doug Birkey:** And 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 thank you to our listeners for your continued support and for tuning into today's show.

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