

# Virtual CRT Missile and Drone Defense Innovation in Combat

[Riki Ellison]

Good afternoon, ladies and gentlemen, from probably the best spring day this year so far in Washington, D.C. I'm Riki Ellison. I'm the founder and chairman of the Missile Defense Advocacy Alliance. We've been involved with it for 40 years, as we talked about it yesterday.

This is our 95th Congressional Roundtable. We're back to back from our Israel discussion yesterday to this discussion today on missile and drone defense innovation in combat. And we are watching combat happen today in two places in the world, and we're seeing innovation being forced to happen.

I think there is a reality that's hitting our country now. As we saw this morning, the Department of War put out the Brigadier General Matt Ross, the JIATF-401, on zero policy on drones flying over any restricted area in this country. That's a fundamental step in understanding what our gaps are and what we talked about yesterday on passive defense. We're heading in that direction to deal with these types of threats, as we've watched Israel and its population do a hell of a job on passive defense. Being able to protect themselves before the stuff happens, because they don't have enough capability to defend against everything that's coming at them. That is part of what we need to do as we go forward, as the threat goes forward.

In our country, especially the United States of America, we've won wars, world wars, cold wars, on our innovation, on our ability to innovate, our ability to take tremendous risk, and our ability to accept failure after failure after failure after failure to get that capability. And we can just go right at it. World War II was won because of innovation of Oppenheimer, Groves, and our ability to do something nobody's ever done in the world before, to stop the World War. And I would say the same thing with the Cold War. After Sputnik flew, Schriever and the US Air Force was able to innovate on solid rocket fuel, Minuteman, that stabilized and was able to eventually beat down the Russians in that war.

So we're here today, a little frustrated, because we've watched innovation happen. Three years of innovation that has been not made here, but innovation to come under the cost curve and the attrition of warfare, which is all going to come down to at some point, to be able to do cheap capabilities that was given, not only to the United States, but given to NATO, given to all the nations to learn from. And yet here we are, three years later, in a war in Iran, and didn't take those lessons at all, to be able to defend ourselves and ultimately our borders in the United States.

So there's something wrong with our system. Maybe it's the way we go into wars and lose quickly with legacy systems. We have to understand why that's still happening. And I think that's culture. And our President right now and our administration are creating a revolution to bring and take risk on innovation. We haven't seen it yet in battle. And we understand that you have to increase your capacity of your magazines. So you start signing, and they're doing it, multi-year contracts with legacy systems. But the problem with that, great you

have numbers, two or three years from now, some of those legacy systems are going to be outdated. Innovation will go right underneath them. And here you're stuck with these long contracts and you can't get out of it. You've got to take risk on innovation, and you're going to lose some. You're not going to win 100%. You don't need to. But we're at that point right now that I think we've got to learn these lessons the hard way. We're learning the hard way. We're scrambling right now to get that.

So I just think it's important also to look at what are some of the great innovations that are happening from the Ukraine conflict, and even from the last 18 days, because there are innovations happening as we speak. Because our warfighters are so damn good, they make things happen in situations that they're in.

So I think we want to explore this. And we've got three phenomenal speakers that are going to come to you on this. They're on our team. We've got Tom Goffus who's sitting here right next to me, who to me has seen innovation all the way in his whole career, from being a fighter pilot in the U.S. Air Force all the way up through the staffing of the Senate Armed Services Committee, where he saw innovation come right into those channels in the congressional way and somehow get to the valley of death. I don't know how that happens, but he was part of that. But most importantly, he was also the 3, the civilian 3, head of operations for NATO, and led the innovation that Ukraine was doing and got it funded and moved to put it back into Ukraine. But none of the other NATO countries learned from that or did that. So he's going to give a great perspective, and obviously he's seen some phenomenal innovation from Ukraine in his position.

And then we've got Charlie, who was the Army General for the entire Pacific, the warfighter that is facing our biggest threat to mankind, our biggest threat to world order. And the frustration of him as a warfighter, having to fight with legacy systems, not being able to innovate fast enough, not being able to get capabilities that they want out there quick, still waiting for 10-year requirements or five-year aspects of it. So it's going to be great to hear a warfighter perspective.

And then you've got Mark Montgomery, who also was a staffer at the Senate Armed Services Committee and also saw innovation being stopped, and was a tremendous Navy Admiral, seeing the evolution and the support of the Aegis system, which has, out of all the systems, has brought in innovation pretty good. And so he's over there right now, and I believe in Lithuania, but he's involved with Ukraine in innovation that we're learning right now to put on our capabilities.

So that's the intent of this discussion. And we're unafraid. It's important to have accountability because your culture, a winning culture, does not win if it ignores its failures and calls its weaknesses out so it can get better. We've got to shift out of this being fat and happy and the world champion for the last 30 years. We're in a new fight right now, and we're going to have to use our best players. And some of our best players are out in that civilian world. We've got to bring them in, bring innovation in. Some of our best players are allies. Some of our best players are independent partners. But we've got to bring them in to win.

Okay, so I'm going to start off, Tom. I'm going to give it to you. I'm going to give it to Tom Goffus. He's a great friend. He's been with us for many, many years. Thank you for taking the time to come here, Tom. It's all yours.

[Tom Goffus]

Thanks, Riki. I couldn't agree more that innovation is an absolutely key factor, a key ingredient. And in my role at NATO, the front seat to watching the Ukrainians really do this well, innovation, was one of the privileges of being in that position. And I actually met some of the biggest innovators through MDAA that you helped connect. And that's what I think is this organization at its best.

So one of the themes at the Munich Security Conference last month, and this was SACEUR, General Grynkewich, so Grinch said, look, we've been thinking about things in really short terms, that the war is going to be quick and lethal and done. This particular phase of Russia's war against Ukraine is now four years old. It was supposed to go for about four days. Those were all the expectations. And one of the things that that means is you need to do things at scale. You need to be able to do things at scale, that mass matters. And the final one is if the war goes on like it has, like we expect it will, then you need to be able to innovate. Otherwise, you get left behind. And so that's been one of the key features, even though it looks like a war of attrition, underneath that dynamic, the squirrels are running really hard to innovate in Ukraine, and they're doing it really well. So I wanted to cover a few things that I've seen that work there that aren't necessarily embodied by our system, to hold it accountable, as Riki is kind of saying.

The first one, and I think this is really important, we've trained our whole system. We have institutionalized the concept of requirements of industry building to very specific requirements over and over and over again. And the way I've seen that is, so you build a new airplane, the requirement is it must go 500 knots, and it goes 499 knots, and that's a big red flag failure. That's not how innovation works. It simply does not work that way. You do not define specific requirements. You define an operational challenge, and let the really talented and creative people that are based in technology and engineering figure out how to solve it.

My example is acoustic sensors. I talked to the chief architect of the acoustic sensors in Ukraine, and to familiarize you, it's about 15,000 sensors across the nation that track all the drones and cruise missiles and low-flying aircraft, whatever's up to about 1,000 meters across Ukraine. They have low altitude coverage that costs less than \$100 million total for the entire country of Ukraine. For us to do that with radars would be hundreds of billions of dollars.

So I talked to the guy that was running this thing that set it up, and I said, did the Ukraine government put on an RFI or RFP to do this? And he said, no, there was no defined requirement. My friends saw that people were dying, their neighbors, their relatives, and so we decided we were going to solve it. And that's where the innovation started, not from a defined requirement. You must be able to sense a drone or an aircraft with this many decibels at this altitude. And so what they went out and did is they just built something that went after the operational challenge.

Now the good news is the operational challenge is really defined, defined pretty well. And then it grew with the Shaheds and everything else. That's the first step is to define the operation. I'm not saying it's just wide open, because I saw this in Europe after 9, 10 September, when about 20 of the Russian drones came across the border into Poland. And then everybody all of a sudden got religion on drones. Does that sound like the Middle East to you? And the idea there was they said, okay, let's go out and do something. One government gave their military \$30 million and said, go buy stuff. And they said, what do you want? And they go, we don't care, buy it. Well, what if it doesn't work? Buy it. So that was answering a political problem, not necessarily the tactical problem that they were trying to do.

So the first step is to define the problem. And most of Europe went out and did that. They just said, stop drones. That's the problem. That's not enough detail. They asked Albert Einstein, they said, if you had an hour to save the world, how would you spend that hour? And he said, well, I'd spend 55 minutes defining the problem and five minutes solving it. We skipped the first 55 minutes. So you got to define the problem. Is this small drones, terminal protection, or is this wide area, larger drones like Shahed? So number one is to find the problem, but don't specify to the gnats ass requirements. Give the operational challenge and let the innovative people solve that.

Number two, same guy. I talked to him three months later. He looked like he hadn't slept in three months, big bags under his eyes, because he hadn't slept for three months. The way he did this was the operators of the system that he was building and redefining as he went, he was over shouldering them every night. So he wasn't getting much sleep. And then in the morning, the AI went through the data and the afternoon, they reconfigured all the sensors at once.

So number two is the operators must talk to the innovators. And that is pervasive in the Ukrainian culture. And their companies are talking directly to the people doing the operations. It got to the point where one of the drone companies told us, we set up a 24 seven hotline phone line that the operator could call. And we have people on duty 24 seven and go, I've got this problem. This is a problem with your system. Can you fix it? So they could fix it overnight if they had to. So that's number two.

Another one that Riki that you covered, I think was really good, was risk tolerance or in a different way of putting that is failure tolerance. We let the perfect be the enemy of good. The innovators do it opposite. Instead of sitting around and trying to get the perfect solution, they build something and put it out there. And even if it's only the 50 percent solution, they accept that and they have a rapid test, fail, innovate test cycle. Obviously, the battlefield short cuts a lot of the problems that's there. But that that speed of that has to be really, really fast.

The next piece is the public private. Like I said, companies have access to operators. We do not do business that way. If you're a sub for Lockheed Martin doing something really innovative and you say, I want to talk to an operator, you first go to Lockheed, then you go to somewhere in the Pentagon, then you go to the operational command, then you get to

the operator. By then you've missed the operational cycle. The public private piece is absolutely vital.

You know, when one of the best it was a U.S. company went to Ukraine to help them with interceptors, and it's one of the best interceptors over there. They went over, they took all the data, and then they went home to Arizona for a year and came back with the solution. And by the time they got back, the solution had nothing to do with battlefield reality. So they did it again. This time they did in three months, still had nothing to do with battlefield reality. They now have engineers on the ground talking to operators every single day there.

This public private piece is absolutely critical. And the piece that they get out of the way is there is no vendor lock there. You don't get a three-year contract. And they're doing business. The businesses have procurement, and this is a strength and weakness, directly with each brigade. Each fighting unit goes to the favorite company and buys their drones. And I asked one, I go, well, are you getting guidance from O&D what you should produce? And they go, no, the brigades give us that. The people on the battlefield give us that and give us the feedback, and then we iterate.

So my last piece here, and you said, why is this so hard? One of the reasons why I think this is hard for our system is it is old school hardware-defined capability, battleships, tanks. And I'm not saying we can change the process for those necessarily, but now we're in a world of software-defined capability. And when you get to that, you have to be able to iterate fast. That means that instead of making one million of something, you're making 1,000 at a time, 100 iterations of that, so that you can innovate on each one of those. We have these acoustic sensors. We're trying to get them into Europe. And there have been some allies that have adopted quickly. On the acoustic sensors, Latvia now has about 1,000 of them on their eastern flank that they're actively pursuing and putting in place.

So we have people that can get there and can get there quickly. I tried to bring it into NATO. I went to one of our acquisition professionals, and I guarantee you go to any procurement expert, and you go, hey, we should get these acoustic sensors. And they go, what's the requirement? First question, what's the requirement? The detailed requirement. I can't do anything until I have that. And the answer was, that's not how this works. So all of our reflexes are anti-innovation, at this point.

We can fix that, but we need to get into more of how commercial does software development and less of how we do hardware procurement. And so I think those are decent pieces. I'll end there and move on.

[Riki Ellison]

OK, Tom, great explanation. Let's get to the heart of the problem in terms of how do you change this? Do you have a congressional revisit of the whole thing? Does Congress put law in to change it? Do you hold accountable R&E and the people that ignored this? Do you hold accountable the big six companies that not enough profit? How do you, and from your point of view, we've seen it, NATO nations don't want to touch it because they don't want to pay for it and they don't want to address it. Just at that big macro level, how are we going to do this as a world? And what we're watching, we're having a very hard time with the counter UAS in our bases and so forth around everybody is because we didn't address this.

So it has to be fundamentally changed.

[Tom Goffus]

Right. And what I'll say is that the problem is different. I see two different problems in terms of why aren't the allies innovating and adopting and then scaling these things? And then the other one is sort of our U.S. system and the way it's defined.

So starting with the allies, one of our biggest problems, and I know you and I both were advocates of something like these acoustic sensors. And we went to countries and said, hey, this is really great. What do you think? And they said, oh, no, no, no, we're going to build our own. Rather than adopting what is already out there that's combat proven, combat refined, a year on the battlefield has got to be worth at least five in the test range, just from all the restrictions and everything else to go with it. And they refused to adopt this and just adopt it and play with it.

[Riki Ellison]

Is that a cultural issue?

[Tom Goffus]

It's a cultural issue. They're still north of 80 percent of allies still procure most of their stuff. Eighty percent of what's procured in NATO is procured nationally. Think about that. Thirty two different nations. That is not the efficient way of doing business. It's a political decision. And so that's part of the culture there.

On our side, it is part of the culture because we put it in place. And to your point, it was Drucker that said culture has strategy for breakfast. And I think culture has innovation for breakfast. Actually, that's part of what we're dealing with here.

I'm a little hesitant on the congressional side. It'd be interesting to hear what Mark has to say about that. But I know he knows this is every time the armed forces would come up to the Hill and the senators would go, why are you guys going so slow? That was one hand not talking to their other hand as they wrote more regulations and more hoops that you got to jump through to do something like this. And we would never do business the way the Ukrainians do, which is a brigade talking to a singular company. It's part of the DNA that we've developed over the last 50 years, quite frankly, that we need to get past. And yeah, there could be a reset.

I think we need to get better specifically at the software defined capabilities. There's going to be you're not going to build a thousand different tanks, or at least you shouldn't. So I think, yeah, there's going to be some legislation.

[Riki Ellison]

You think we should have a Goldwater-Nichols Act? Do you think we should have an autonomous man? I mean, this go big because I think you're going to end up against someone like China with mass on mass. I mean, tremendous numbers, cheap capabilities that are autonomous. We got to deal with this.

[Tom Goffus]

Yeah, well, the autonomous capability or just even the unmanned system. That's the card the Russians are playing. They're creating an unmanned service. I asked the Ukrainians about this, and it was a chief scientist for their autonomous capabilities, really unmanned systems. And he had the opposite approach. So we need to figure this out when you study it a little bit.

The opposite approach is it's organic to every unit. And that's the way the Ukrainians have gone. They have less top down organization. The Russians are doing it the other way. I don't know how successful they're going to be because, as you know, if you create a service, sometimes they get ostracized by the other services for the way they do things. So I think that figuring out how to get our acquisition system focused on operational challenges defined, but not to the gnats belly button.

And then two figuring out how to let our operators talk directly to the innovators. And I've got a friend who works for one of the unicorns out there that when he started working about five years ago there, he described it as I feel like a burglar trying to break through a window stealthily into the Pentagon to have any access to what I need access to do the innovation piece.

[Riki Ellison]

And just last question, besides acoustic sensors, besides automated machine guns or automated rocket guns, what's the best innovation you've seen coming out of Ukraine that you can apply to somewhere like the Middle East?

[Tom Goffus]

Yeah, this is where we got to do a lot of learning. And I know there's a particular group there in Ukraine called lasers group, and they have, I won't call it doctrine. I'm not sure the Ukrainians do doctrine in the sense that we think of it as a book with all this stuff written down. They really do evolution of TTPs. And the leader of this organization is on the Russian top 10 wanted list because he's been so successful. That group in 2024, 2025 did about over \$10 billion worth of damage to the Russian forces with drones. They've done things like put Starlink on the top of a drone to make sure that you've got secure C2. And the TTPs that he laid out, he laid out a whole battlefield, you know, 30 to 50 kilometers deep, 30 kilometers wide and said, I need this many heavy, this many ISR, this many FPV hunter killer drones to clear this area and get after the bad guys. They've got a whole battle system like we do at red flag in the air force for their unmanned systems.

That's probably the most innovative pieces. It's not the individual technology. It's the capability when they combine them, that has been the most impressive piece and it's old school with new school. And I think you've got it right here. I'll just mention that, which is a helicopter shot down by 50 Cal with help of the acoustic sensors sitting next to an F35. I guarantee you, if they had F35s, Ukrainians would do better than we would at how does a 50 Cal bullet and an F35 go together to get the optimal solution.

And I think that's what it's going to take in the Middle East to get what we need to do over there. Right. And I'm not talking about the F35 necessarily as a platform. I'm talking about a sensor.

[Riki Ellison]

Great. That was a great analogy. Thank you.

Okay, Charlie, you got some big shoes to fill here, buddy. So we have our retired four star general who was in charge of the army in the Pacific. Like I said earlier, with probably our biggest threat to the world in world order, China and his viewpoints, his perspectives on innovation would love to hear, Charlie.

So it's all yours, sir.

[GEN (Ret.) Charlie Flynn]

Yeah. Hey, thanks, Riki. And thanks for this forum and what you're doing personally and what MDAA is doing.

I'm going to actually come back to a couple of things that Tom mentioned there that I think are helpful to mention. And I'll start with one of them. So like, how do you do this? Well, first of all, in the past, it's been commanders, and then the programmers, the acquisitioners, the combat capability folks are somewhere else. And those days, we have got to exercise that out of our system. We have to have commanders matched with, they have to have funds forward. They have to have a public-private partnership forward. They have to have forward engineers, so they can do everything that you just outlined there, Tom, because that's what's actually happening. And we are beginning to change that now, but it's taken us way too long, way too long.

So that would be my first comment. It's not, it's no longer commanders and their units, and then the programmers, acquisitioners, and engineers are somewhere else. You have to have commanders, commands, you have to have funding, you have to have a public-private partnership, like on demand, and you have to have the engineers forward to be able to do those things. And we can't just leave it for a theater of war or where there's combat going on. It's got to be everywhere all the time, because even though you may not be in lethal contact, you are absolutely in contact out there. You're just in contact in the EMS, you're in contact in space, you're in contact in spot and cyber, you're in contact in the information domain. So this is happening all across the world, not just happening in the two regional wars that we have going on here in Europe and in the Middle East.

The second big point I'd make here is like, and it's kind of point A and point B, my two big takeaways, and I think that most people would agree there, it's like A is like, we got to get the cheap attributable drones are going to win quantity battles. Expensive interceptors are just going to lose the cost exchange every single time.

And then the part B of that is not only do we need to have that scale, we have to have AI-enabled autonomy with rapid forward position software updates, and they're going to beat that hardware turn every time. This is no longer long lead times waiting for equipment. We have 3D printing, we can do small, you know, microwave oven 3D printers, how we can print buildings for God's sakes. I mean, we have the technology to be able to do this forward, and we need to do that very, very quickly.

One of the concerns that I have about what's happening, Tom, you mentioned a couple of these, is the capture of all the lessons learned that are going on, that's going on over there

right now, not only in Europe, but also in the Middle East. I'll just give you a quick historical analogy because I thought about this this morning. Between World War I and World War II, if you got wounded in World War I, you had a 4% survival chance. In World War II, you had a 50% survival chance. So we increased 46% survival rate.

Why? Because we had mobile hospitals, we did antibiotics, infection control, trauma, surgical care went forward. They were basically putting medics forward with doctors.

Now I'm not on drones and missile defense, but here's the point. The point was, literally in seven years, we increased our survival rate by 46%. I do not know where in the Department of War, in Congress, in the services, who's putting together that data package to say, listen, here's what we learned in Europe, and here's what we learned in the Middle East, with drone, counter drone, here's the percentage gain that we made by either survival rates, kill rates, etc. I don't know where that's happening, but I hope that that's happening somewhere, and here's why.

Here's why is because I believe that the next problem we're going to is right here in the homeland, and then in countries that are partners and allies, and it's going to go after critical infrastructure. It's going to go after critical infrastructure like data centers, nuclear reactors, telecom, rail, air, sea, ports. I mean, we're going to get clogged up because they're coming at these locations now. They've done the reconnaissance on them, and so now we get into this pickle of, well, how do we do this? We know how to do this in somebody else's playground, but it's going to be very, very difficult policy-wise and regulatory-wise to be able to do those things around our critical infrastructure and our strategic support base to project our power, but also to protect our power so it can be projected.

I'll end on two final points. First of all, just rattle off, I think, like seven areas that we need to be paying attention to that I certainly would have enjoyed having a little more forward commanders with commands, with organizations, with money, with public-private partnerships, with engineers, and they are like drone-on-drone wolfpack swarms. We need to get those out. We need to be using them. Truck-mounted commercial lasers, AI targeting, acoustic and net guns with small UAVs, Starlink – Tom, you mentioned that – Starlink jammers, 3D-printed kamikazes, interceptors, a community of counter-UAS sort of organizations that have access to off-the-shelf gear, and then high-powered microwaves on shipping containers.

I could go on and on. There's a ton of things out there, but like the idea here is who's putting the library together and who's looking at what the math is so that we can – the next time this is happening or a month from now, we ought to be measuring, hey, this is our success rate. This is our 40 percent increase in survivability of critical infrastructure, our people, our capabilities, our forward positioning.

One last comment I'll make and then open to questions to you from you, Tom or Riki or Mark or anybody. Transition from defense to offense. I think that sometimes we forget that the Patriot, the Aegis, the THAAD, the radars, that was – it was not designed to catch every interceptor. It wasn't designed for that. It was designed to protect critical infrastructure, protect the CAL/DAL, but not knock down every rocket or missile. It was enabled – to enable you to transition to the offense. It was to defend, take a blow, but then be able to transition

right to those points of origin or to those other locations of launch that you now could go on the offense to.

I think that sometimes we spend too much time thinking about how to stop every arrow coming at us, because that's impossible. We need to be thinking about, okay, how do we absorb this blow, but then how do we go right on the offense and take all of that capability away? This is the part where we get a little bit of a debate because proportionality isn't going to matter here. You have to be disproportionate. You're not going to be able to win unless you're disproportionate in the amount of violence that you put on your enemy or your adversary.

Frankly, I think what's going on right now in Iran is – that's what you're seeing – is a disproportionate amount of violence that needed to be put against that enemy. Why? To put it down, to make sure that they break their will and they break their capability to actually generate a combat capability that can hurt us.

I'll pause there, Riki, for questions.

[Riki Ellison]

Yeah, Charlie, and I'm with you on that. I think passive – introducing passive defense to this thing is huge, and we saw it this morning.

But I want to go right at you, because the Army – this is their mission set over any other surfaces. Counter-UAS, drone defense, missile defense is their – why aren't anybody else getting paid to do this? They've got officers, generals, acquisition. They've got everything. And the Army was absolutely brilliant when they converted Patriot, which was an air-to-air air force, to a BMD system in 1991 in the Iraq fight. They were brilliant in the Stinger, creating the Stinger that beat the Russians in Afghanistan. Then all of a sudden, they're not doing – they're not producing stuff fast, and it's a history, and it's backed up.

How do we change – how does this – is it leadership? Is the culture so embedded of risk adversity, of doing what they've been doing all along, and all the jobs that are created because of it? We've got to deal with this problem, man. It's not being dealt with.

[GEN (Ret.) Charlie Flynn]

It's two-part. I mean, at the end of the day, it's a risk aversion matter, right? Like, Congress is unwilling to take risk. Services are unwilling to take risk. We've over-regulated our training.

I mean, the idea – the idea, because Tom put the left-hand, right-hand up about – and one hand, they go, why are you going so slow? And the other hand is writing the regulations to say, slow these people down. Like, we can't – god forbid we give money to Flynn as a commander forward, and he wants to fly these UAVs and print them in 3D printers and fly them in a foreign country.

I mean, they absolutely lose their minds. I mean, just getting – just doing coordination with the FAA to get the airspace over your base to fly UAVs that were throwaway, not even on your property book, I mean, you're talking about a two-day – the 25th Division commander,

who's now a four-star, it took him the better part of two years just to have that happen over his own base, over his own base.

So the reality of it is we have, like so many other things in the country, we have over-regulated training, and we have over-regulated experimentation, and we have overburdened commanders. Meanwhile, people are off-site making decisions about what the field – when they ought to be out in the field with the commander with some money forward, with a rapid ability to put them on contract with public-private partnerships and engineers to fix it on the site, like on the scene. But that is – you could call it culture. What I'm saying is it's a risk aversion, okay, and it's pervasive. It's everywhere.

[Riki Ellison]

So you think that's – you didn't answer me on the Army, though. Do you think because that –

[GEN (Ret.) Charlie Flynn]

I'm telling you, all of them are. I mean, the Army, all of the services are. For God's sakes, this is everywhere. I mean –

[Riki Ellison]

So Charlie, how do you change this? How do you change this to get it to where, Tom, you want to take it?

[GEN (Ret.) Charlie Flynn]

I think the Secretary and his team are trying to do that right now. They're trying to do that right now by pushing – you know, they're changing the acquisition community. They're pushing these folks forward. I mean, what I haven't seen is money go forward into their hands.

Like, Tom, what did you – in Ukraine, they're just – they've gotten money out with the commander, and the commander's changing right there software, hardware, employment, deployment. He's doing attack, defend, countermeasures, and he's doing it in real time. Well, you know, and they'll say, well, we could only do that in a combat zone.

My point is I would have loved to do that out in the Philippines. I would have loved to do that in Australia. I would have loved to do that in Guam, Japan. Pick a country. But we're overregulated. There's no – you can't do that. You can't do that. You get in trouble. You go to jail.

[Riki Ellison]

And we didn't learn that from Ukraine, which we saw three years ago, and now we're suffering from that in our bases and so forth in the Middle East?

[GEN (Ret.) Charlie Flynn]

No, no. This is like – I mean, I'm giving you an example that's – like, why were we surprised by EFPs in the Middle East? Why? Well, because we didn't do the intel collect on it, and then we didn't plan for a different type of an IED to be fielded into the combat zone. But we got surprised by EFPs. They didn't come out before IEDs. They came out as a much, much more lethal form of an IED. So you see the changing that's going on right now. That's my point to

the early one is who's out catching all this stuff? Who's out there from the United States and the U.S. military and Congress going, "you know what? We are not going to have this happen again." And the only way to overcome it is to almost take a model of what Tom described by what the Ukrainians are doing, is they got money forward with commanders, they got a public-private partnership, and they are changing stuff forward in real time. But what we can't do is wait for the war to happen to do that. What I'm saying is it has to happen every day, everywhere across the world, and we better start doing it inside the confines of the continental United States, Hawaii, and Alaska, because they're coming there next.

[Riki Ellison]

Thank you. Thanks, Charlie. All right, Mark.

We got Mark to come in now from Lithuania. Mark, I know you're going to have some good insight on this discussion. Go ahead, bud.

[RADM (Ret.) Mark Montgomery]

Yeah, thanks. Good discussion. Yeah, I look at, instead of looking at drones, I look at counter drones because I think it's some of the same lessons, but also a little bit different too.

So first, in counter UAS, we missed some opportunities. I don't want to go into the whole sad trail of tears, but the Ukrainians were in America, not at the service level, not with the army or with the department, but with the White House saying, we can provide this. And I think a combination of the White House not really wanting to work with Ukraine and offer them, thinking that they would then be somewhat beholden to providing something back to Ukraine.

I think not enough pressure from the department saying, we really have a problem here. I think it's fair to say that we were not screaming from the rooftops that we have a counter-UAS problem until sometime around March 1st at three o'clock in the morning. And then we were screaming.

Somebody said I need to study that. I think it's in the rear view mirror and let's talk about what you have to do going forward. Okay, on counter UAS.

The first is we really had to find the requirement. I think CDO Donahue is leading this for the military and being that he is right adjacent to a nightly display. And he has petrified partners all around him, particularly to the east in Eastern Europe.

And he's been working hard on this. I will say people are watching what's happening in the Middle East and are traumatized. If you take the first two weeks of ops in the Middle East, that's two weeks of what Ukraine gets every two weeks, 26 times a year, three years.

So just to put some perspective on this, this kind of aggressive cost deposition by an adversary has been happening. And we've been able to observe it. We have not learned the proper lessons from it for a lot of reasons.

And the current administration, I think broadly, would prefer not to have a public discussion of it. It's so thick that I routinely observe they don't engage engageable targets that are

going to hit civilian infrastructure in order to conserve rounds. This is not Iron Dome, which doesn't engage targets that are going to hit a farmland or doesn't engage targets that are going to hit an uninhabited area.

This is not engaging things because you know it's not going to hit what we consider a vital target. So you got to define the requirements. The first is get your sensors right.

And look, this is going to need everything. It needs some high end sensors, some low end sensors, but it's a mix. And I'm saying words that all the military guys know.

It's like trying to mix oil and water and get an even spread. It's unclassified and classified. I mean, it's cloud based and siloed and trying to bring them all together to paint a usable picture for the commander, the air ops commander in this case, and his joint commander above him.

This Ukraine has something close to it. Now, they don't have a lot of our high end sensors to be the hard thing to integrate with. So when they say they're integrating it, they're integrating the lower end.

We can integrate the lower end. I think CD's doing that a little bit. And we can integrate the higher end.

But bringing those together is going to require some extremely good integration tools. And I'd hate to say AI driven, but I think AI is really going to help with that a little bit. And they're across a variety of domains.

This is what's unusual for us. We've gotten really good at RF energy. We love to bang energy off of a thing, get it back, measure the time, we got complicated algorithms that tell us exactly what it is out there.

That's not how Ukraine's doing it. They have a little bit of that, but then they have EW, they have electro optical, they have acoustic, and they all play a role. None of them are determinative. They're all contributory, and it leaves them with a usable picture. Now, I will tell you, when you bring all that together, one of our goals is to not shoot down a friendly plane. We kind of put a lot of value on that premise.

I'd have shot down Goffus if I needed to, but apparently we're not allowed to do that. The Ukrainians don't take that same approach. I mean, it's not that they're trying to shoot down a friendly plane, but they're not sitting there trying to drive the software, the integration solution to the gnats behind, so that they know that the Patriot's never going to engage in F-16.

A Patriot engaged in F-16, it's bad. Now, it didn't help that it didn't even have link, and that wasn't because of us, but they don't get fixated on that. We do, so it's something we're going to have to resolve.

Then you're going to have, so you have the sensors, you have the network. The third thing is, we don't get into this enough, and we're doing good in some areas of counter-drone. I'm about to talk about one.

You have to have an aviation component and a ground component to this, and the Ukrainians have it. The aviation component is about protecting broad areas. You can't use a ground component over broad areas because you'd need too many ground units and too many people to man it.

They use aviation for that, and then they use aviation for thinning the herd. When there's 60 drones coming at a ground target, it's not going to do well if 60 drones show up over the ground target, so they get F-16s up rapidly and thin the herd. Two of them go up, take out 12 Shahids.

Two more come up, take out 10 Shahids. Two more take out 14. Suddenly, the herd's 10.

Now, it's doable. They've got F-16s doing that, equipped with advanced precision kill weapon systems and a sniper pod on the plane. They don't have the perfect stuff.

They do not have the Air Force Gold Star stuff on there, and they're still getting a 0.85 and above PK. Our guys with F-15s and the Air Force Gold Star system and the right warhead and the rocket and a few other things, I think they're closer to 0.95, probably 0.92 to 0.95. It does it. I think most of them, you'd have two carriages of seven each, so 14.

You could go up with 28. I'm not sure that's how we do it. I just think that our flight bags aren't long enough to get rid of all of those, but who knows? I'm not going to do that. Some squadron commander do that, but they're up there. They got that.

By the way, we have this. Our F-15s have it. Our F-16s have it. Our F-18s have it. I don't think our fifth generation aircraft have it because of some unusual things with them, but those other three definitely have it. We can do it from carriers.

We can do it from land-based. We're in great shape. It's going to be critical, by the way, to establishing convoy operations to the Straits of Hormuz.

You're going to have three or four cap stations up just equipped with that and then with some precision-guided munition to take care of bad guys who pop their head up. The second part is the ground part. Now, this is where we and our Arab partners had an epic fail.

This is where we can learn a lot from the Ukrainians. Again, it's a very different acquisition thing, but their counter-US is not the same as their drones. Their counter-drone is closer to us.

Again, it's a defensive weapon. We've had all four of us had this discussion before. Defensive weapons are inherently more expensive, and they're harder to manage because a fast thing has got to hit a fast thing.

Now, in this case, it's a 300-knot thing against a 200-knot thing. It's not Mach 4 and Mach 3, but it is hit-to-kill. Most of these counter-drone are hit-to-kill.

Two things got to arrive in the same meter square within a tenth of a second or two-tenths of a second at a 500-knot closing speed. That's harder than the average bear, and it's going to cost you a little money to make that happen in the endgame. I love the Ukrainians.

Nothing can have a normal name, but they're like General Cherry, Spear, Sword, Sting, Octopus, and Mirops. There's interesting stuff in there, though. Several of those are joint ventures. Mirops is with Eric Schmidt. It's out with the US government. Octopus is with the UK. We have some expertise developing in this. Our foot's in the door. You're talking about \$3,000 to \$15,000 per round.

Now, I will tell you, a guy working in the US is close on one of these similar systems, and he's like, I really drove the price down. I'm like, what is it? He goes, \$50,000.

That's completely believable to me that even in our low non-prime, sub-prime, new prime, whatever you want to call this guy's company, startup, \$50,000. Why? Because he had to go China part free completely, and that cost him a little bit on a couple of the pieces of gear.

I think there are two to 15 kilometer ranges in there. You can pick them. I think they're 70% to 90% PIAC.

Here's the thing, the American one had to have a really high PIAC because we can't help ourselves. I get it. It's anchored in defending the warrior, bringing everybody home.

I get that. But at some point, you cannot build everything. We did not do this in World War II, by the way.

In World War II, we did not have to out-tech you. We did not have the best fighter plane in either theater for a long period of the war. We did have the best bomber.

That did come about. But we didn't always have the biggest naval guns. We didn't have the best tank, that's for sure.

It's a weird thing that happened to the US somewhere in the 50s and 60s after Korea, when we started to say, you know what, we're going to use our technology not just to win, but to make sure Americans don't die. Now, the problem with that is it leads to these PKs that are 0.95. Then when a guy thinks he's winning with a \$50,000 counter UAS, that's a big thing to fix. I just thought about that whole historical perspective while I was talking with you.

That's a big deal. It really drives a lot of this. By the way, that explains our whole defense industrial base. I should write an article on that.

And then there are 200 to 250 knots. Now, this is a problem because the Russians figured this out, and they've taken the Shahed, they made what was called a Joran 2 with a lawnmower engine.

They changed the lawnmower engine to a rocket. Now, that did take the Joran 2 from about \$40,000—they're already more expensive than the Iranian ones—to, I think, almost \$200,000. Now, the good news is if you can figure out to counter drone that with something that's 10 or 15, you flip that cost curve even deeper.

So to me, that's important. Now, how do they get this done? They have an ecosystem called BraveOne that builds drones and counter drones and other defense tech.

What it does is it helps companies out as they get started, gets them integrated with the U.S. They just, in fact, swung through four cities in America over the last week, I think, looking for capital. But remember, even in Ukraine, these are more expensive defensive than offensive. It's like four is to one here.

Probably the same for us, but our four is to one on a much, much higher denominator. Now, you asked earlier, why is this all broke? I gave you one good reason, which is that we put an incredible premium on our weapons working in a way that protects our people at a very high PK.

But then we do have four other problems, and they're called Congress, the services, the Department of Defense, and the Defense Industrial Base. In that order, too. I would not put the Defense Industrial Base near the top of this problem.

They are genuinely reacting to our stupidity. The Congress will not let a program die that's in their district, period. I've seen one or two die, and it was like four senators pinned down one senator and beat him to death.

The second thing is, that's a bad Congress. A good Congress also has a problem. Tom and I both had the same job in the Senate Armed Services Committee, where we would write brilliant legislation that said, do a multi-year buy of this weapon system, and the appropriators are like, "why would I do that? I give up control of the money. I don't want to give the government five years." Now, we finally got so badass broken that last year, they authorized seven different multi-year buys.

To the Trump administration's credit, they took advantage of it. The full order is not in, but 7,000 Patriots, I think. They took the Patriot line from 600 a year to 2,000 a year.

They took the Tomahawk line from a couple hundred a year to 1,000 a year. They did the same with AMRAAM, SM-2, SM-3, SM-6. Those ones weren't as good as the Patriot dad ones.

Those are the two premier ones. But all of them, the appropriators had to finally give up, but Congress has been a problem. The second one, I know I'm late on this, but the services, it's hard for them to part with a program, and it's hard for them to admit they failed.

These are type A personality general officers and senior executives, for the most part, who just can't believe they failed. So we give them more money and more time, and they don't fail. In the meantime, the taxpayers get failed.

OSD, they don't make hard decisions about when a COCOM says he needs 100, OSD will allow the services to explain how 10 is okay. And at some point, the functional component commanders generate these things to the COCOM, the Army, Navy, Air Force, and this number is not pulled out of anyone's backside.

It is incredibly war-gamed, and then it's treated like it's a random number generator that the services can play with. So the Department of Defense has to do a good job. Finally, the Defense Industrial Base, because they can't trust us, they make risk management decisions that make things cost more and go slower.

But again, because they can't trust us, and one fact I think I want to throw out there, there's a Reagan Institute that just did a survey, and there's a shocking number in there. I assumed that the big three nukes companies like SpaceX, Anduril, and Palantir had 5 or 10 percent of our procurement budget. I was surprised to learn they have 0.5 or 0.6 percent. The big six are still 99.3 percent because there's a couple other small startups in there. That's a shocking number. It means that we're still buying from Lockheed, Raytheon, and Northrop.

Now I will say this, and you don't get to read this stuff in the paper. Lockheed, Raytheon, Boeing, and Northrop, and Harris, whoever else is in it, have been kicking some serious ass for about 17 nights. Our weapons have been working.

The F-35 has been good. Where we haven't done well is where we did not have a weapon. Not everything's perfect. We're going to get lots of reports of things that didn't go perfect, but we need to take credit where credit's due. Every once in a while, you've got to say out loud, the Defense Industrial Base does produce a product that imposes costs on enemies and protects American warriors. Where we didn't have a requirement and we didn't have a product, we did get punished and lost a few people.

All right, Riki, I know it went a little longer than normal, but I wanted to talk about our problems.

[Riki Ellison]

You're awesome, Mark. That was great. What's the solution?

You told us those five groups. How do you change all that? How do you do that?

[RADM (Ret.) Mark Montgomery]

We can't do what they do. I love, Tom explained, and I was with their former minister, here with me in Lithuania, and we were talking about it. He's the one who set up the program where within a brigade, there's a battalion kind of 3D printing and making it, and they get rewarded. The better they do, the better they produce, the more cash they get access to.

We can't do that. We generally don't run businesses within military organizations. Stuff can go wrong quick, right?

[Riki Ellison]

What can we do, Mark?

[RADM (Ret.) Mark Montgomery]

What we can do is use Bishop's funds a lot more. In other words, say, here's your \$2 or \$4 billion, and you're seeing this. By the way, the reconciliation bill for 2026 was written this way.

There's at least 15 programs in there that are like \$2.3 billion for doing something, making an effect. That money can then be used very, I don't want to say loosely, but flexibly and with great agility by the department to allow things to happen. Then, of course, the most important thing, and both Charlie and Tom mentioned, we've got to say to program executives, especially small program executives, "you can fail."

When you fail, you're back in the saddle with a new program three months later. Now, if you fail twice or three times, we're going to have a discussion with you. Startup companies in the non-DOD, non-DIB world have 60%, 70% failure rates, not the defense industrial base.

As I said, we're like 99.3%, and we sacrifice someone to the ghost of Nunn-McCurdy once every three years. Each service takes their time at that altar. Once every 10 years, you've got to do that.

The other thousands of programs percolate along over budget delivered late. I think it's coming up with a system where you reduce the risk by saying the money doesn't belong to the service. The service doesn't feel like, PEO, you're going to succeed.

I'm going to slip you some other money to get you across the finish line. No, you're given the money. You work or you don't.

By the way, you have to have three is to one. What I mean by that is, if you need one of something, this isn't what happens right now, which is, well, we need one air defense, so we need Patriot. We're just buying Patriot.

This is three is to one. You go, hey, three companies are out there, low cost, starting up. Let's see who does it.

We'll drop two. The favorite weapon you and I've talked about in Ukraine, or Tom and I've talked about a lot, ERAM, extended range attack munition, 10 small companies and six medium-sized companies bid on that. That was fantastic.

Two got picked. They didn't just pick one. Lucky they picked two because one of them beat the other one like a drum and actually getting a low rate initial production.

These are all things we never do. We don't have a 16-thing competition. We don't pick two winners, what we do sometimes in a bad way, but in this case, a good way of picking two winners where we actually give them the money for thousands of missiles.

You've got to change that risk matrix, Riki.

[Riki Ellison]

And Mark, I'm going to go back on your argument.

[GEN (Ret.) Charlie Flynn]

Can I just add one thing here? I think also to Mark's point, what I was saying, this should not just be restricted to Europe where there's fighting or in the middle. We've got to do this in every theater all the time, what Mark's outlined.

We can't wait for the war. It has to happen before so that you're testing that stuff. You're experimenting with that stuff.

Candidly, everybody will get a lot more comfortable. Commanders will get more comfortable. Services will get more comfortable.

Congress gets more comfortable because you're actually putting money in the hands of Commander Montgomery with engineers, with public-private partnerships, and they're doing stuff in real time to change the capabilities that we have. We can't just wait for the problem, and then we're going to solve it all overnight. It's just not going to happen.

[Riki Ellison]

Mark, go to that big buy, multi-year buy. So you believe in that, even though those technologies, they become extinct, or you can get a much cheaper way of doing that. That's going to happen.

You know that. It's just the way your life is. So how do you incentivize those small companies to take the risk?

[RADM (Ret.) Mark Montgomery]

I do wish we had done the multi-year years ago. Some of the weapons I described are past the prime for multi-year. I get that.

But I'm going to tell you two things. One, we still have a high-end war. If we need proof of that, turn the news on.

For the last 17 days, we have not been fighting with \$100 weapons and \$1,000 weapons. We've been fighting with \$100,000 to \$3.4 million to \$20 million with SM-3, whatever that is, million-dollar weapons. So you need your high-end weapons as well.

You need the mix. I think what we have to do with the higher-end weapons like that, Riki, is if we can drive down costs through different production, I'm okay with that.

[Riki Ellison]

So why are they motivated to drive down costs to do that?

[RADM (Ret.) Mark Montgomery]

No, no, no. But the good news is, first of all, we have money like a drunken sailor, and we really do. I don't know how we're going to spend the \$150 billion from the reconciliation without violating a lot of laws, and there's a \$200 billion supplemental, and then there's going to be a defense budget.

It's not going to be the \$1.5 billion, the President said. It's going to be \$1.15 trillion. Then you can add in this \$200 billion, and they'll find something else to add.

Then the President would say it was \$1.5 billion, and we'll be in the ballpark of it. My point on this is we're going to have a lot of money, so we can do two things at once here. We can fund the low-end development and get it, but we need both.

You and I have talked about this. When you look at Taiwan, I call it the East Coast, West Coast, like Biggie Tupac thing. The West Coast is Hellscape, which Sam Paparo talks about, where you need ground, you need Army, Navy, Air Force, lots of UASs, lots of low-cost munitions to sink thousands of ships and hit thousands of helos.

We tend not to talk about that in an airborne assault. But the East Coast, that's high-end warfare. That's 60 PLA high-end destroyers, 15 cap stations with high-end fifth generation fighters, supported by their version of the AWACS.

We got to roll that stuff back. That's submarines. It's PRISM.

It's LRASM from bombers. It's Navy Destroyer Tomahawk, which we tested for some reason on a ship pier side, I think. I'm not sure about that, but I hope not.

I don't think you get credit for that in the operational test, but let's hope it was a moving ship. Anyway, you need all that stuff. So you need both, Riki.

You're going to need both. And by the way, the Chinese are like, hey. Yeah, go ahead.

[Tom Goffus]

Yeah, I was just going to say, just to piggyback on what you're saying there, to pile on, if you will, in talking to General Grynkewich, Grinch is very adamant about this. He goes, look, as a commander, this is what I need to do. We have a limited magazine of very high-end stuff.

I need to figure out where to put that. Think about Europe, and you're going to say A2AD and Kaliningrad. You're going to need high-end stuff to take that down.

He goes, after you do that, now you need cheap attributable, what General Flynn said, sort of cheap attributable, the truck bombs then come in. And they can be dumb bombs at that point. But so kicking in the door, you need the exquisite stuff, and then there'll be a second and a subsequent piece.

And he feels like, as a strategic commander, he needs to make those decisions on where to use those exquisite, expensive, limited-number kind of assets.

[Riki Ellison]

Can I put out an idea of an autonomous command, a unified command, a four-star command that could handle mass-on-mass that China's going to give us?

[RADM (Ret.) Mark Montgomery]

I want to say first, the bad idea of Intercom, which was somebody in this team, like putting together CENTCOM, EUCOM, and AFRICOM, I believe is burning on a funeral pyre somewhere around Tehran. Because the idea that NATO and EUCOM and AFRICOM could be, and CENTCOM, and I'm fighting this war as well, all of us, every one of us who'd been a general officer in the joint world was like, that's not going to work. But luckily, we went and proved it for ourselves.

I don't, Riki, we do command as command. And it's really hard to say, you have this, and there's this other. If Ty were here, he would have back-flipped out of the room, because you know he protects the Air Force Command and Control like it's a child.

And I agree with Ty on this. I think you got to integrate this into the ground component commander and the maritime component commander and the air component commander. And you know what?

Those dudes figure shit stuff out. I'm not sweating that, Riki. I'm not. The good news is—

[Riki Ellison]

You're not sweating that fight with China that's going to come at massively?

[RADM (Ret.) Mark Montgomery]

I'm sweating the fight, but not command. I'm not sweating our ability—

[Riki Ellison]

Who's going to fight that fight? Who's been doing it?

One of those services?

[RADM (Ret.) Mark Montgomery]

Okay, you want to know that that's a fight. Believe me, that's a seven-year issue that Charlie and I were deeply involved in and painful, and we hate it. And it should have been fixed.

But I'm not going to then complicate that by saying, in addition to those other things, I'd like to introduce the counter-UAS commander to you. You bring him in. Plus, we want to integrate this.

If we want a battalion commander, a brigade commander to be fully embracing every UAS tool available, make him own it. If it's in his domain, she or he own it.

[Riki Ellison]

Is Golden Dome part of this now?

Is Golden Dome part of this? They don't have the offense.

[RADM (Ret.) Mark Montgomery]

Do you have any other crazy things you want to just throw on top of this?

Spacecom? Is Star Trek coming in?

Yeah, so I got to go in seven or eight minutes, but I'm going to just take this out because you're pissing me off. Is Golden Dome part of it?

Golden Dome will integrate into a combatant command or into multiple combatant commands, because I think there's a defend-forward part to it that will be shared. But because elements will be ground-based, and NorthCom's not going to be able to negotiate a deal with the Japanese for a radar. Indo-PACOM's going to do that.

Same for Grinch. Same for Brad Cooper out in CENTCOM. So we need to let the system work.

The command and control system is not what's broken broadly. Requirements are broken. I do think we need to figure out how we're going to fight the joint force in a Taiwan scenario.

I think it's complicated by loss of—Honolulu's not as close as we think. And this isn't like Brad fighting it, Brad Cooper fighting it from Tampa, because the enemy couldn't take that

system down. The Chinese enemy, and I think the Europeans, which, by the way, Grinch is in Europe, and he'll be in Europe for the fight.

We have to figure out a four-star, trusted—could be PACOM, could be one of its components—probably needs to be permanently forward. And I think we were struggling with that for a while. Nimitz had to do this.

He had to leave Hawaii and move to Guam.

[Riki Ellison]

Charlie, do you want to chip in on this?

[GEN (Ret.) Charlie Flynn]

Well, let me go to the earlier one. I mean, everybody has got to be thinking about autonomy, AI-enabled systems.

And I think this is the wisdom of the crowd kind of thing. I think you're going to get a best idea from multiple commanders with multiple threats in multiple theaters looking at this with industry right next to them. I think, again, the value of having a little liquidity when you're forward and having some cash with a commander and bringing experimentation and exercises together at the same time all the time.

I think there's a ton of value in that, not just for the command and commanders and capabilities, but for technology integration. It'll change organizations. It'll change concepts.

It'll modify plans. I mean, it's probably the modern way of doing in-stride wargaming of your plans because you're bringing these capabilities while you're out in the fight. And again, we can't be doing the wargaming back there.

I'm all about wargaming because without wargaming a plan, you don't really have one. So I just think having that stuff forward and being able to test it out as far forward as you possibly can is really good. I do think Mark makes a very important point, though, about position of the command and the commander in these really violent and challenging fights.

[Tom Goffus]

Charlie, I think you hit it spot on. CD—Riki and I watched him wrestling with this, trying to deal with troops in contact in a drone threat environment, and he's experimenting with this. And to your point, he's running a bake sale, trying to find enough money, tens of thousands of dollars to be able to enable him to do what he needs to do.

So that's one. Two is-

[GEN (Ret.) Charlie Flynn]

That's because he's in the army. He doesn't have any money.

[Tom Goffus]

Well, that was one of my last efforts as I shoved off of the NATO peer was to try and get him some NATO money so that he doesn't have to spend half his time begging for funds and half the other time spending them, to your point. So I do think commanders enabled is

something that we need to do that, you know, funding. And not that, you know, to Mark's point, not that Ukraine is the end all be all, we can't always do business that way.

But every one of those brigade commanders has two procurement officers, one that goes up to MOD to get 155 rounds or whatever the hell they need that MOD can provide them in Ukraine. And one that's down and in that's dealing with these individual companies to do that. To the autonomy point, to your point, Riki, I don't think CD wants help from an autonomous four-star.

That's not what he wants. This was what we went and saw in Poland. What he was doing was trying to determine, and Charlie knows this, it's been since World War II, it's been the argument in the army, which Gabby gets picked at, how many troops in a squad?

You know, currently the Brits are at eight, we're at nine. And he actually had his guys out there on the battlefield. And the question was, do I need to add a counter drone guy or gal to this mess?

Or can I make it autonomous? And that's what they were experimenting with. The soldiers had a two pound, look like a walkie talkie on one hip, two pound on the other.

One was a spectrum analyzer, one was a jammer, and they wear an antenna on their back. And so he's in the middle of that fight there. And do I need a specialist?

And would that specialist be trained somewhere else and not know how the army really works and how do you join them up real time? So I kind of go with the Ukrainian piece, which is the more organic to units, somebody that's an expert to do that. And we had that when I flew F-15s, EW was on the leading edge.

To program all that crap, we had two contractors that deploy in war by agreement with us to do some of the high-end stuff. But we didn't have EW guys that were totally separate and an EW command of any sort.

[Riki Ellison]

Hey, Mark, I just want to ask you from your perspective, why didn't our bases have the best counter-UAS stuff? Who's to blame for that? I know you went through the five things, but specifically when we know we were in Ukraine, we see it all, we've done it all.

Why in the hell don't we have that? What happened?

[RADM (Ret.) Mark Montgomery]

I know it seems like poor man's stuff, these drones, but they were innovation, right? And what you're saying is why were we not keeping up pace with innovation that's happening that we could observe on the battlefield? Look, I think that gets into, we just were slow to develop.

I'm sure if you look in COCOM, what are called IPLs, a counter-UAS system, that's their integrated priority listing, has been requested from several COCOMs, probably EUCOM primarily, probably from US Army Europe. But I think it was probably in all of them over the last three to four years. But that's the problem with our system.

That IPL product would have successfully produced a counter-UAS system in about seven years. The problem was it got used against us two and a half years later, approximately from when this really was an obvious problem. And by the way, the aviation, we did trick ourselves.

We successfully defended Israel from a whole bunch of drones twice, once with missiles, once with the APKWS in 2024 and 2025. That was a Shahed having to go 400 miles. Turns out Shahed versus fighter plane is a losing thing for the Shahed when it's 400 miles.

When it's 40 miles across at the throat of the Gulf, or 60 miles, Shahed wins. That's how they hit Bahrain. The F-15 or F-18 did not get in a position to shoot fast enough, or it shot down four out of five, or eight out of 10.

I don't know what happened, but I promise you, we were thinking, well, we got these fighter planes up, but that was not a short man's drone game. So look, there's a lesson to be learned here. The system failed because the enemy product was delivering faster than our defensive development, product development was coming.

We've had this happen a handful of times in the past, but we haven't had it spank us on the battlefield this fast. Counter-IED is another one I can think of where we had to learn what an MRAP looked like. I know Charlie and I both got to jump pretty quick here, Riki.

I think we kicked the crap out of all the questions.

[Riki Ellison]

Yeah, I think we've done great. Just to wrap up, I'd like to have each of you wrap it up, but just, what do you think is the most innovative thing we've seen come out of combat from either Ukraine or this current 18th big fight that we could leverage?

[RADM (Ret.) Mark Montgomery]

This counter-UAS, the one I talked about, I'm comfortable with, and as this has been pretty cool to watch.

[Riki Ellison]

Well, just say that again. Just explain what that is.

[RADM (Ret.) Mark Montgomery]

The counter-UAS system development. I mean, it's what allows them, without this, Ukraine's societal resilience would really be tight. I mean, it's a lot less tight because of this.

[Riki Ellison]

Do you got any final thoughts on the whole innovation combat?

[RADM (Ret.) Mark Montgomery]

You got me with counter-UAS. Go ahead, Charlie.

[Riki Ellison]

Sure.

[GEN (Ret.) Charlie Flynn]

I think, I actually think, I'm kind of, I look at like, you know, Midnight Hammer plus Absolute Royale plus what's going on. I mean, I'm just really, the lethality and reach of the U.S. military, like, people should never underestimate, you know, and if you do, you do it at your peril. And I'm really excited with the space, cyberspace, counter-space, EW work that's going on.

It's just fascinating to me. Because I think that, you know, my knowledge of it and my understanding of the application of it, like, for the normal person, they don't know the extraordinary coordination that's needed for that. I just think it's just amazing what we've been able to do.

And I think it should strike, you know, a tone of fear in every enemy and adversary, because it's just amazing to me.

[RADM (Ret.) Mark Montgomery]

I'll add one thing to that, and that's planning. The ability for us to plan so many strikes, I just, the numbers, even Deptoula has to eventually admit this is impressive. And what I'll say is, thank God for Clyde.

But, you know, there we go. Okay.

[Tom Goffus]

So, yeah, I'll piggyback a little bit on what Mark said earlier on the most impressive things. It's the sensors, the data share, and then the effectors, or the network, as he put it. In Ukraine, right as I was leaving, I couldn't verify it, but the report is they've got an electro-optic IR detection system that sees Shaheds out to 20 kilometers with a 90%.

That's pretty damn good if it exists. We don't have anything like that yet. But the real magic in their sauce is they connect the dots between electro-optic, thermal, acoustic, radar, common.

One thing they're missing is the SINGIT, passive RF detection. And that's going to be well-enhanced by AI. They overlay all that with AI, but none of that would be possible without what they call SkyMap.

And that's what they're trying to introduce in the Middle East with some of the folks out there. That is the connector, the data share, cloud-based, real-time. And when you can overlay all that stuff, you can then target it very quickly.

That's probably the most important part. And honestly, I know it's really complicated to get to this point, innovators must talk to operators. That's how companies are getting the biggest talent right now.

If you went to Anduril and said, "why do you have such a great recruitment of some of the best brains in the business?" The answer is, one, they're working on really tough problems, which really those people with those kind of intellects on engineering and problem-solving love it. And then two, they know they're making a difference in a big way and they're part of something bigger.

That's what's changed in the last four or five years. And if we can get that embedded in how we do business, I think that's really big. I like one of the ways you do that is the way Charlie said, which is, and Mark, Bishop's funds and Commander's funds, where they actually control some money and they can move it around rapidly.

They'll know where to put it. You just gotta trust them.

[Riki Ellison]

This was a great discussion and we're a great country. We're a world champion country and we learn, we adapt, and we're going to adapt from this. And I think what's happening in the Middle East right now and Saudi and Bahrain and UAE and Israel and combining that with what we're doing in Europe with EFDL, they're under pressure, under a cauldron like that.

We're going to create new capabilities. There's no question. There's no question we are going to move, which I'm excited about, is open C2 moving across multiple nations now.

This is now going to become global. Just on the big picture of that, forcing the United States to lead that, to be able to bring that in. What's so frustrating is that a damn automated machine guns are now going to be put in play and they should have been done three years ago to help our base on that.

So, no, it's great and I think for all of us to understand fundamentally, I think Mark put it out, Charlie put it out, you put it out on why our system doesn't move fast enough to do this and we're going to go attack that. So, thank you. Thanks for everybody that listened to this great conversation, a great discussion.

Thank you.