Forging Ahead with Speed: Transitioning to New Technologies at the Pentagon

Moderator:

- Ms. Carla Babb, Newsmax

Panelists:

- General Randy George, Chief of Staff, U.S. Army
- Mr. Dan Jablonsky, CEO, Ursa Major Technologies
- Senator Mike Rounds, U.S. Senate, South Dakota
- Mr. James D. Taiclet, CEO, Lockheed Martin

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Announcer:
Ladies and gentlemen, welcome to panel 8: “Forging Ahead with Speed: Transitioning to New Technologies at the Pentagon.” Please welcome to the stage Ms. Carla Babb of Newsmax and our distinguished panelists.

Carla Babb:
Well, hello everybody. I am Carla Babb, the national security correspondent for Newsmax. This is my first time moderating a panel at Reagan. So normally I would be pretty nervous about this, but I'm not because I have such a great panel right here. I have the Army Chief [of Staff] General Randy George. I have Dan Jablonsky, CEO of Ursa Major. I have Senator Rounds over there from South Dakota, and I have the CEO of Lockheed [Martin] Jim Taiclet. My goodness, sorry. Guess I am a little nervous after all.

But it's great to see you guys here. We are going to be talking about "Forging Ahead with Speed: Transitioning to New Technologies at the Pentagon". Rapid shifts in AI, next-gen systems—they're all redefining what it takes to move promising technologies from development into operational use. And as the requirements are evolving, the

Department now has to figure out how we're going to identify these capability gaps and align our acquisition priorities with what's needed in contested environments.

We need to modernize acquisition pathways—and I'm staring at you, Senator Rounds—because we need congressional oversight. And we need investment to accelerate transition. And I want to remind everybody that I have this handy dandy access to your questions. So I've been told that you guys know how to submit questions and if you want to submit some, I will be asking these wonderful gentlemen your questions as well. But before we go into the tech panel, I do want to firstly ask a little bit of news of day just on the National Security Strategy that was just released. And since we are here at the Reagan National Library, which represents the president who significantly contributed to the fall of the Soviet Union through a strategy of military buildup and also anti-communist movements, and through rhetoric that rejected the idea of moral equivalence between the United States and the USSR.

Reagan asserted a clear moral battle between freedom and totalitarianism, which he believed was crucial. But there are concerns in this NSS that just came out that the Trump administration lays out a very different approach on Russia. It says, and I'm quoting it, "many Europeans regard Russia as an existential threat", but it does not explicitly say that Russia is a threat to the United States. It does not mention that Russia attacked Ukraine and it appears to put the blame on Western Europe, not Russia, for the lack of a peaceful resolution to the war in Ukraine. This comes as the majority of Americans—according to a survey put out by the Reagan National Defense Forum—Americans overwhelmingly responded that they want Ukraine to be victorious. And the policy director here at the Reagan Institute says that Americans "perceive Russia as an adversary and they perceive Ukraine as an ally." So, Senator Rounds, I'm going to start with you. Is the Trump administration making a strategic blunder here in the NSS? Do you like the majority survey view Russia as the aggressor and the adversary?

Mike Rounds:
Well, I think the idea that the president is trying to lay out is, once again, peace through strength. And I think the secretary today made it clear that they want to reinvigorate the Reagan approach, which is peace through strength. I agree with all of that. The challenge that you're asking is, well, what about Russia? I know that they focused on China primarily and about the challenges in the Indo-Pacific region, which is in front of everybody's minds right now. I've shared in the past and I continue to believe that Russia really doesn't want peace. I still think that Russia really doesn't want peace. And I should say Mr. Putin really doesn't want peace because he thinks he can win against Ukraine. I think Ukraine is putting up a marvelous fight. I think the vast majority of us in the United States Senate feel that we should do whatever we can to assist them.

We're not interested in putting our young men and women in harm's way, but anything that we can do to assist Ukraine in the defense of their freedom, that's probably the right thing to do. So I'm not going to second guess what the President is trying to do with regard to his focus, which is on rebuilding the military. I think this is a great lead in for additional funding for additional military capabilities that we know we have to have. And so I think we should be focusing on what the president is trying to get done here, which is peace through strength, be so powerful, be so strong that the adversaries decide that it's just not the right day to have that effect. But there's one more piece there that I think I should also tell you, and that is I think the president right now in the middle of negotiations probably does not want to be seen as anything other than an arbiter in terms of trying to find peace in Europe right now. And perhaps because of this particular product coming out right now maybe it's not the best time to be going in and specifically charging Russia as an adversary when he's trying to be a person stopping a war. So I'm going to give him a lot of leeway on that just because of the current events around trying to find a peaceful solution there. And we wish them all the luck in the world at getting it done. I'm just not optimistic. I just simply don't believe that Mr. Putin really wants to find peace.

Carla Babb:
General George to you. He kept using the word adversary. Do you find Russia to be our adversary? And you were just in Ukraine recently. Can you tell us a little bit about what you saw, what you did, what you learned from that trip?

Randy George:
Sure. Yeah. I spent about three and a half days with all of their drone brigades with a lot of their units, visited tech companies, talked to their Minister of Defense, and there's obviously a lot we can learn from the Ukrainians and everybody gets really focused on just the drones sometimes and the technology, but how they're organizing for the fight that they're doing and coming back and we are trying to take those lessons on a near-daily basis. A lot of that is feeding into it, and I know we're going to talk about it the rest of this panel on what we're doing to change, but I think it kind of reinforces what Senator Rounds was talking about on how we have to, which is what I was encouraged about with the NSS, is that we are going to have to build up our industrial base, we're going to have to move at speed, we're going to have to cut through the bureaucracy to do that. And that's exactly what we're doing and it's why we have done, Secretary Hegseth announced the acquisition reform and we are already well on a pathway to do that.

Carla Babb:

So let's talk a little bit about how we do that. The Army just put out their plans for sweeping acquisition transformations. It's considered—will you back this up—is it the biggest shakeup to Army's buying process in recent years?

Randy George:
Well, I think it's much needed. I don't know if we've put an adjective in there, but basically what we're doing is traditionally you would have requirements and we're trying to change first how we do requirements that there's a lot of things that industry knows how to solve better than we do. And so we've done this, for example, with our network and just try to describe what it is that we want the network to be able to do. And we've gotten all their engineers involved in helping us do it. But typically that goes over and then you give it to the acquisition, then it goes over to contracting and it takes five to seven years to go through this process and then it takes that long to produce things. And what we really want to get is where all the trade space are. I think we've proven that with some systems.

We've fielded next-gen squad weapon and we're already on our fourth iteration in about 18 months. So we have changed that based on soldier feedback and I think that that's what we're going to have to do. The other thing that we're trying to do is get a lot of commercial, more commercial companies basically undo the last supper and get a lot of people back involved with this. And we're going to unveil a tank new M1E3 that everybody said would take six or seven years to build. And it's, we already have one that's finished and we're going to have a platoon that's out with formations next year. But besides General Dynamics, it's Caterpillar, SAPA, Anduril has been involved, but I think we need to get commercial industry involved in this to move at pace.

Carla Babb:
So reducing the consolidation that we started in the nineties after that last supplement—

Randy George:
I think the biggest part of this is risk. I think that everybody with the processes built to go through and every step of the way. The other thing we're doing is going directly, we've done this with transforming and contact where we basically have engineers, companies inside of our formations, seeing the problems that we're trying to solve and then making corrections to whatever things that they're giving us, the drones or autonomous systems.

Carla Babb:
Let's bring the CEOs in. What are your thoughts on that?

Jim Taiclet:
Well, I think that the chief is correct. We need transformational change in the way our military operates and the relationship between the Department of War and industry and broadly speaking industry. And so what I look at this through a lens of an engineering problem. So we have escalating threat or escalating demand for a typical business. You have technology moving at the fastest rate in human history, both digital and physical technology. And you have a relatively fixed resource to address this equation. And the only way to change the outcome, which is a diminishing outcome of effectiveness, is to change the system. It's unlikely that we'll be able to materially change any three of these factors and therefore systemic change is what's required. And so what we're doing at Lockheed Martin and I spent 20 years building telecom and technology networks in the commercial world, started out in the Air Force, did some time in the aerospace industry, commercial side mainly, and then went into telecom and came back as chairman and CEO of Lockheed.

We need to take all the lessons of the last 20 years that the commercial industries have developed and port them into this industry. And the way to do that, in my view, is to make the defense and aerospace industry as much like the tech sector as we can. And how do we do that? I think you start with the service approach to a business, a technology business like telecommunications, AI, cloud services, they are services. There are things that go into creating the service—hardware, firmware and software—but the way that those industries have developed is they take a service and just, I use an example of Google Maps. It was pretty rudimentary when it came out, but every three to six weeks it got better by ingesting data, making corrections, having a better wireless network along the way, better chip sets that you could process the mapping faster and all the traffic issues and data.

And so every three to six weeks that system got better and now it's pretty darn good. And we should look at our services, and I don't mean the military services as you know them, but the services we try to help the government provide are things like surface warfare on the sea. Sinking ships — that's the service. Air superiority, shooting down airplanes — that's a service. And if we were able to reorient our industry to keep the best of the vertical kind of production system that we have and then fuse that through the Z axis, I call it, with a mission technology roadmap, then we would be able to insert whether it's hardware, whether it's network, whether it's a software, an API, a new vendor into that system at any point in time when the maturity of the technology is there to do it and aid that technology roadmap to fill in something you talked about earlier, which is a mission gap.

So I'll give you one quick example and maybe let Dan give his examples. We build the HIMARS vehicle and the missiles that go on it predominantly, and it is designed originally to hit a stationary target. Well, we looked at it through a lens to say we could make that system more effective to close long range kill chains, not just for stationary targets like command posts, but for moving target like a transporter, erector, launcher on a road. It's moving. It's not a fixed target that you can just put a GPS coordinate and it'll hit it. So what we did was we took satellite data to identify moving targets of interest. We took F-35 sensor system to aim it towards the target to get a weapons quality track. We sent that up back through the satellites back into the HIMARS vehicle using a component that we invented and put on it and a network that we created. And now the HIMARS can hit a moving target. The problem is there's no system in the acquisition organization to be able to buy that service, to buy that improvement. And that's something that really has to change in the acquisition system.

Mike Rounds:
And we've got legislation part of the NDAA pointed directly at that.

Carla Babb:
And just to follow up on that, you talked about the HIMARS and you have stuff in Ukraine that has been used and when we saw that initial problem with Ukraine in 2022, the problem was scaling up fast enough to get them what they needed. So how do you scale up in some of these systems and equipment? What do you need for the Army to do and for Congress to do to help you scale up faster?

Dan Jablonsky:
And just to be clear, my systems are not in Ukraine yet.

Carla Babb:
Well, the SRM,

Dan Jablonsky:
Yeah, we're building things that will be able to be used there as well and hypersonics as well. But I think like Jim was saying, and that's a good example of where I think the thrust lies here, which is you need modularity, which if you have modular systems, you can mix and match depending on how that threat changes. You need flexibility because the battle scapes are changing very, very quickly. So you can't get locked into requirements that are seven years old because some procurement officer said that's what you need. What you have to do is say, well, actually what China's doing today is this, and I know these things we wrote at some point, but you got to flip 'em. You got to

flip 'em fast because you got to get there and you need speed. You can't think about things in 3, 5, 7 year, 10 year cycles.

I mean, yes, you'd need to do that in terms of capital allocation, but not in terms of how products come off the line. Those products have to get there, they have to get there fast, and they got to be in the hands of the war fighters or they're just not useful. And if they don't overmatch the Chinese or a Russian or whoever's capability, it's also not a good thing because then it's blood and treasure and you don't have enough of these things. So the way we're thinking about this, and we're partnering across the ecosystem, we're partnering with the primes. They've got wonderful assets and they've developed technologies that are phenomenal like the F-35 factory in Texas, if you haven't been to something like this, it is a national treasure. I want something like that. But these factories, that's a great example as we need them for munitions, we need them for ships, shipyards as we need them for hypersonic capabilities and space capabilities. They have to be built on first principles now from 2025, 2030 manufacturing principles. So they should be agile, they should be additive, they should be flexible, and you should be able to build lots of stuff in them so you don't have to lay capital in the ground every time you want to change something, which means then that gives the military a lot more strategic advantages here and a better cost point as the ecosystem changes.

Carla Babb:
Talk a little bit about the agile funding capabilities that you say that you want looking at getting capabilities from Congress instead of specific weapons you talked about that—

Randy George:
So we're getting ready to do that with—drones is a perfect example. I think it gets to a little of the conversation. I don't think you're going to have a program or record where you buy some drone and think you're going to have it for 20 years. Things are going to change more rapidly. I also think even for missiles, I think cost is going to go down because the 3D printing and the things that we can do and how manufacturing is changing. So the problem is if we get locked into budget lines where we get told to buy this one particular item and buy it for the next 20 years, it doesn't matter if the requirements changed, you're locked into that. So I think that's the discussion we need to have. That's why I think we need to have more people involved in this space. And what we're trying to do is just say, "Hey, we want to spend this much money on drones" or "we want to spend this much money on long range munitions" and just have a little bit more flexibility.

So I think that has grown over time. I do think that there's a way—I'm looking down at Senator Rounds cause—I do think there's a way what we do is actually all of that stuff. I could bring it in here. I could probably have my guys bring up right now an iPad and show you. We can show you where everything is at, where we're spending it, where the program is at because we want to have oversight. We need to have that on how we're spending that. And I just think with the digital tools nowadays you can do that.

Carla Babb:
But the concern for industry is the predictability. So how do you square that? How do you solve that problem to give the industry leaders the predictability?

Randy George:
I think it depends on what we're doing. I'll use ISV as an example, which is our soldiers love that vehicle—infantry squad vehicle. It is—and we're buying that— it's basically just a small portion for General Motors because it's based on the vehicles that they're already—Chevy Colorado—that they're already producing. They upgraded the engine, they upgraded the transmission, they made changes to it by coming out with our soldiers, but they're still producing for the public. So I think that it depends on what the systems are. We probably have to be, it's a little more of a discussion when we start talking about long range missiles and doing things like that. But we are looking at how do we have common platforms and then maybe the things that are only changing are the missiles that are inside that.

Carla Babb:
You're nodding, Senator.

Mike Rounds:
Oh, absolutely. Look, acquisition reform is critical, but it's got to start. Congress has got to start doing its job again. I mean we're still on a continuing resolution. How is the military supposed to be responding when we're doing something that is now over basically two years old in the way it was set up in the first place? Number one, we got to fix our appropriations process. I personally think we ought to be doing appropriations every two years on a budget that's set up for two years and then take the midterm and actually do due diligence, find out what we've got to be modifying and if you've got to do a supplemental, do a supplemental. But give some kind of continuity here so that the forces can actually see what it is we're doing. And then along with that, a lot of the stuff that we're doing right now or that we're ordering right now, we ought to be number one listening to what they've got to say and then putting it in play, but giving them the flexibility so that as things change rapidly that they can modify, just give us notice that

they're making a modification to it, but utilize the funds for basically the same system, even if it's been upgraded or changed or a new capability has been added.

And then the other piece on this is the attritable stuff that we've got right now. We should be looking at it just like a service, just like something that is you buy it, you pay for it and it's gone and you're moving onto the next thing. But the drones that we're going to be buying literally thousands and thousands of these things in certain situations.

Carla Babb:
1 million according to the Army in the next two to three years.

Mike Rounds:
But this is the kind of stuff that we have to have a purchasing system, an acquisition system that recognizes that over a period of years. The other piece is as these technologies change, you'll have a whole bunch of engineers that'll be working on a particular project and then they get their work done. Now what are you going to do with the engineers as we've moved past that part of the project? How do you allow them to then come back up and say, there's another project down here that we really should start on. How does the department actually come back in and allow a company that has a system set up to move from one project to another and get the feedback about when these engineers might very well be terminated and then you start all over again building them up?

Those are the types of things that we have to have —things like this forum right here where contractors and the folks who are utilizing their products can, number one, learn about what products are available on the market today that might be less expensive than if they were ordered specifically. And number two, where there are specific items that have to be done to where they can tell the industry, "this is what I need. What are you going to do to try to find a path forward that can be done quickly, effectively", and get on the thing and then how long? And then provide them with an extended period of time in which they can know that they'll have a line open. It's like 155 [mm] shells. We order so many of 'em. And then what are they supposed to do? Shut it down, which they do. Well, that's crazy. I mean, you've got to have an ongoing process. We are not set up to do that. We need to revise that.

Dan Jablonsky:
I think the biggest thing, and I think this goes hand in hand with that, is we've kind of—because we haven't been pacing against an adversarial threat like China, we've gotten used to being for the larger systems, a requirements based system, not a capabilities

based environment. And so if you're trying to follow—nobody's from Boeing here—but Air Force One and all the requirements that go into that, every time you have to get exactly to exactly something, it just takes a lot longer. Any changes become very complicated and it's hard. But if you say generally, look, these are the capabilities and you put that authority inside, hopefully now it's the PAE [Portfolio Acquisition Executives] system. I think the Army just set it up with the fires and controls down in Huntsville and you start to give people authorities and the ability to make reasoned fast decisions with appropriate oversight, but reasoned fast decisions, you're going to get a much better system built and it is going to go faster because you can hold somebody accountable for those things rolling off the line.

And I think one of the things that excites me about pockets of the current environment is like Golden Dome. General [Michael] Guetlein has authorities inside Golden—his purview of Golden Dome right now that are very similar to what Admiral [Hyman] Rickover had when the nuclear navy got established. And if you think about that as a really good example of something that went really fast that was technically hard, that came in at price points that were really stomachable back in that timeframe and we were able to build that industrial base from something that didn't exist anymore, that was really exciting. So that's a perfect example of doing something like this and you can make the legislation and the authorities match into the outcome that you want.

Randy George:
Can I just make one comment on what Senator Rounds brought up and Dan and I were talking about this, but I also think on manufacturing—and this is how you help with the engineers—is if you have the ability to build companies in modern industrial line where you can build not just one type of missile, but you could build several different types of missiles and do those things. I mean I think that that's what we got to look at. I mean, again, that's something that I saw in Ukraine. They had a lot of the engineers that could work on several different things and I think that that kind of capability is here today to build, to start making those kinds of changes. We haven't had that flexibility in the past. We've got digital engineering now. I just think it's changing for the better.

Carla Babb:
So I keep hearing modularity is the future, but how do you actually make that a reality? How do you get the parts to talk to each other?

Dan Jablonsky:
Oh, you define what the interface control devices have to look like, the interface control systems. And on both sides of that, you say, "Hey, do as best as you can to grade the most functionality here, but when it mates up here, this is the rule set." And that means

that if they've got a front end for a system and they want to change it from a land-based to a sea-based, to this kind of seeker to that kind of seeker, to EW to high kinetic, but it needs a certain type of motor that's tunable and you're like, "Hey, build a lot of those types of motors that are tunable." and then it can go onto lots of different kinds of systems.

Jim Taiclet:
I mean the term of art and the tech space for that is standard based open architecture system, which is something we actually had to do for ourselves in Lockheed Martin first because we have four divisions that do four very different things. But if you're going to create a mission technology roadmap for a service or a mission or an activity you need to do, we actually figured out we needed assets and knowledge and engineers from all four of our divisions. So we came up with something. I have one patent for which it's called 5G.mil and it's the open architecture standard that everyone in Lockheed Martin has to use to design to so that we can actually connect that satellite feed to the F-35, to the HIMARS, even though we're in three different divisions of our company. We do that. That's something we've been advocating, Senator, for four years to get into the NDAA that the Department take that on that concept on and convene a standards body of many companies to be able to actually come up with this. So we're all working from the same song sheet that Dan just referred to.

Randy George:
I think we're doing that on small, like Jim says, I think we're doing it on small cases. We've done it with the tank and we've gotten together with different people. But I agree we need to do that more broadly.

Jim Taiclet:
And the Air Force is pretty far along too, Chief.

Carla Babb:
I want to talk about that tank, but first before we start getting into the specific technologies, we have a question from the audience. It says "It's been repeated over and over that there needs to be transformational change at the Pentagon, which is what the Army's trying to do. However, bureaucracy at the Pentagon is notorious for screeching all potential change to a halt. So when should we expect to see meaningful reform?"

Randy George:
I think we're already seeing it in the Army and I think I always tell everybody been asked this before is come back in six months and see what we're doing. We're going to about

to transform 21 brigades from IB—infantry brigade— combat teams to mobile brigades that have drones, EW system, next-gen squad weapon, autonomous systems and doing all that. And it has struggled a little bit with continuing resolutions and funding lapses and stuff, but moving through that and producing things. So I mean we're collapsing business systems. I think we've gone from 700 down to 175 or something to do that. So I mean I think we can do that. I always kind refer to the frozen middle. I think every company probably has that. Everybody has to deal with that a little bit. And I just think right now and with Secretary [of the Army Daniel] Driscoll, we have everything aligned and we're moving out.

Carla Babb:
Let's talk about—because I want to get Senator Rounds back in—let's talk about AI. That's something you talk about a lot. The survey that came out this week by Reagan said that Americans are split on who is winning on AI. 30% say the US is winning, 29% say China is winning, and about 33% say it's equal. What do you think, and what do we need to do to accelerate the use of AI in the military?

Mike Rounds:
We have the edge right now, but we have to be worrying about who has the edge in three years and in five years. And in order to do that, we have to have the people, we have to have the compute power and we've got to have the energy. And right now the thing that we win when we talk about China, we have the people, we've got the brightest minds out there and we want to continue to have them want to come in and participate in the United States. And so that part we're winning on. Now, they've got more people than we do, but we've got some really bright innovative people and we are ahead with regard to the actual developers that are using it. And our ability to actually put everything together has been very, very good. China's catching up, no question about it. But the second piece on this, and that is the compute power.

We've got that as well right now. But once again, China is pushing hard. The discussion right now is how do we keep compute power away from China while we continue to develop it? And that's one that as a matter of policy, we have to decide how do we keep it here and yet at the same time invite the rest of the world to participate in the standards. And for lack of a better way, the rails that we create here using our companies and then finally—and the one that we're not winning on—is on energy. They produce more than two and a half times more energy than we do. They have the capability of producing energy because of more power plants and so forth coming online a lot faster than we can do so right now. That's the area that we have to be working on because if you want to win in the area of AI development, you absolutely have to have the power to do so. We're going to need a huge amount of additional power in the next

three to five years and we're not bringing it on as fast as we need to bring it on. We need all of the above on energy production, but we clearly that's going to be the area that we're going to need the most help on is AI developing, but using the developing enough energy in order to stay ahead of the adversaries, our competitors in China, with regard to the amount of power it takes to actually power those databases.

Carla Babb:
Anybody else want to jump in?

Dan Jablonsky:
I just think when you talk about AI, generally there's a huge topic, there's lots of components to it, and we should be thoughtful about which parts of AI we really do care about and which ones we want to move fast and which ones we don't. China's using AI for social control. I kind of don't want to advance into that area and say that'd be a really good thing. But the one place that I think we think about in industry is unstructured data sets. So not large language models that refine what's going to type next in your phone and those kinds of things, but unstructured data sets that take things like real world data, geospatial data or real world feedback from mechanical systems like everything, mechanical, electro mechanical systems like everything moving on an F-35 and all the telemetry you get from that and how we use AI to make those tools better, the factories better, the maintenance of those things better, the performance of them better. That's a great place to spend time and money. I'm not sure all AI is going into the same things because I'm watching some of the same large language models try and solve the same problem sometimes.

Carla Babb:
And when we talk about autonomy, we've been talking about drones. I feel like I have to point out that last month, Lockheed, we just saw a pilot in an F-22 that was piloting a drone from the jet's cockpit for the first time. Is that the future? And how quickly can we expect to see that on the battlefield ready to go?

Jim Taiclet:
So it is the future and the future is now. So I'll just give you a couple examples. In the Red Sea, the US Navy and commercial shipping was literally under attack from Houthi Rebels. The Navy was considering withdrawing or at least stepping back from where they normally would patrol because the Houthis were firing not only ballistic missiles at the ships which have an Aegis radar and combat control system, which we deliver. By the way, the first iterations of the Aegis were from the 1960s, but it's been updated and iterated every couple of years and it's quite effective. But it wasn't designed to deal with low flying, slow flying drones and cheap low flying cruise missiles, which were then a

threat to the shipping and to the ships, the naval ships as well. And so the radar had a hard time discriminating the actual targets from anomalies in the atmosphere or the wave tops or other just non-targets.

And we were getting from a point where of 40 readings that a radar operator was looking at, two of those would be real and 38 would be not valid targets. You couldn't really use your munitions stores to shoot all 40 of those. So we needed to get it down to where instead of 38 false targets, maybe there's two and you have four on the screen and two of them are false. And then you use algorithms to further refine that. The way we got from point A to point B on that was we took in all the Aegis data from all the ships in the Red Sea and all the targeting information they had, fed it into a Starlink system that sent it over to New Jersey where we have our AI engine for the Aegis system. Every night, we would calculate, based on using artificial intelligence, how to better differentiate using the Aegis system that was on the ship already to be much more accurate. And we did get it down from 38 false targets to two took about a month to do that, but AI is being used today for that.

The second thing that you referenced already is I asked the team, we don't have enough time to put the CCA [Collaborative Combat Aircraft] or the drone wingman control system into the F-35 or the F-22 cockpit right now, but we have enough that we can put it on Apple store tablet and get a knee strap and put it on the pilot's leg and we can control eight drones with a software we've developed on a tablet you can buy in the Apple store that has a single secure connection into the jet system and we can control up to eight CCAs [Collaborative Combat Aircraft] like the one you just referenced with a pilot's fingertip and providing a mission, a target, and then when he lets his finger off the tablet, that drone goes and does the mission. And that's all using artificial intelligence. So this is already happening. It is important to have all the elements that Senator Rounds identified. These are critical so that we can stay competitive in AI, but it's already happening. And the last one, because I don't want to leave General George out—

Carla Babb:
Hold on, let me follow up. So the Air Force can use that now? We are beyond the testing phase?

Jim Taiclet:
You could use it today, we're prototyping it and then it's a matter of what's the acquisition system going to do with that.

Carla Babb:

Yeah, when are we going to see it in the Air Force?

Jim Taiclet:
Well, that's interesting because again, there's no program of record for this advancement in the technology that came about well after the F-22 was built. So this is something that we're self-funding right now. The whole tablet control system we self-funded. We got with General Atomics—I know some of the representatives are here—to get ahold of one of their drones and actually go do this, but we need to figure out how to create that agile acquisition system to do things like this.

Randy George:
I just don't think we have to. I'm not sure we need a big long program. So along with what we're trying to do is you get some of those inside your formation.

I think in the future we're going to make contact with drones first. I do think we are trying to be fast followers with AI and we've just had an AI TTX [Table-Top Exercise] and it's going to help with logistics, it's going to help with admin, but it's going to be a big part of the kill chain in everything that we're doing. But the advantage of those drones is you're not going to have loss of life and you can build those significantly cheaper than these great big platforms. And I just think that that's where we're going to have to go. So I don't think we—if they're modular and you can update 'em, I don't think we have to buy 'em all. You buy some of them.

What's often overlooked, I think inside formations is you also, you have to upskill your people. You have to learn how you're fighting these systems, how you're organized around them. And again, those were things that I saw in Ukraine. They have changed how they go about doing these things and we're going to have to do that as well. So the sooner we get 'em in our formations, I think the better.

Carla Babb:
I want to ask you because we're talking about things that we want to see the troops have now you've got the M1E3, the pre-prototype is supposed to be in the Army's hands this month. Do you have it? Has [General Dynamics] delivered it yet?

Randy George:
We do have it, yes.

Carla Babb:
You have it.

Randy George:
We have one of them. Yeah, we're going to put it at the Detroit Auto Show. I don't know if that's appropriate, but it's going to be out there. It's going to be out there next month and we're going to show it. And again, we'll have all the companies that were there with a part of it. It looks like—and if you get into the cockpit, it looks, and that's what I would call it kind of a cockpit with how it is. But we're also going to, the biggest test is taking it to our soldiers. So we're going to give it to a tank platoon, all four of 'em, and they're going to tell us what it is that works, what doesn't. And it is, it's modular. We can update the active protection system, the engine can be updated, all of those things. And we're looking at drastically reducing the weight. We've got a company working on quantum computing to figure out how we can continue to get the weight down so we just can't get wrapped into—I think the world has changed a lot and we're just going to have to change with it.

Carla Babb:
Okay. Let's talk about hypersonics if we can, because I know—

Mike Rounds:
Before you get into that, just one last thought on the AI side of this thing here. I think sometimes the American public says, "well, this is a passing fad or it's not something that I really want to have be a part of my life"—it's not going away. And the question is how do we appropriately manage it and how do we control it using Western standards? And then how do we make sure that Americans see the value of it in the defense of their country in ways that make the operation of government more efficient? I mean, just thinking in terms of using AI for auditing systems and so forth. We know Maven is a good example where it's actually doing things now to save us money.

But then there's one more piece of this, and that's quality of life when it comes to healthcare, which is really going to sell the American public on just how valuable AI will be when we start talking about being able to solve drug problems more quickly, being able to address the issues of cancer, diabetes, and so forth at a lot faster rate than we can today.

So this is a huge part of it, but on the military side, when we talk about a kill chain today, it's changing to a kill web where you're literally going to have lots of people in space and in the air that are going to be observing. You're going to have lots of different ways of communicating from one to the other. And AI is going to be that thing that brings this all together so that the guy that's got to make a decision about shooting at a particular object in a time of a crisis has lots of different tools available to him that we could not do without the incorporation of AI as an agent in that process.

Carla Babb:
And see, I told you guys we weren't going to have enough time to do all of this, but here we are. We've got about 11 minutes left. Before I ask another audience question, I want to turn to hypersonics. When we talk about the competition with China, we're not doing so hot. A lot of people will say that China is winning the hypersonic—the hypersonics race. Lockheed, I believe you just announced, was it this week that you've opened up a new hypersonics system integration lab in Huntsville? Can you both please talk a little bit about what we need to do to get to a point where we're not falling behind China on hypersonics?

Jim Taiclet:
So General George's crew has a hypersonic missile launch vehicle and the first set of missiles that could be used today if we needed 'em, but we got to scale that up and produce 'em. That's a program that is going on. And so we'll be able to do that. The Chinese and Russians probably have more available capability right now in hypersonics than the US does, but we also are working on counter hypersonic technology too. So this will be another cat and mouse game where we're going to have to continue to work with the department and invest in the latest technology and get it as quickly as we can out there, what the Russians and Chinese are going to do. So we need to get much faster at that cat and mouse game. When it comes to hypersonics.

Dan Jablonsky:
It's kind of one of these things where if they can hit further and faster than you can, that's a bad thing, boxer analogy. And so they've got some category leading things right now. They've got more of them than we do, and they can get to places and change the amount of time we get to make decisions where they can shrink that down quite a bit. And they also change the calculus on survivability. So when we say hypersonic, we're not only talking about something that's really fast, MACH 5 plus, we're talking about something that's maneuverable in that environment in which it's moving. So 3,800 plus miles an hour and maneuverable, and that changes the battlefield pretty quickly in terms of how far and fast you can hit somebody or how far and fast they can hit you, and the level of survivability on that. So I think it's a really important thing to be working on. We're obviously, that's one of the key technologies we're working on, and we've been flying with a partner Stratolaunch on some of this for targets and test beds to be able to see what our systems do.

But then the next piece of that is, can you do this and can you do it affordably and can you get it fielded into systems? Because if it's just science experiments over here, hey, that's cool, but that doesn't bring a capability to the war fighter. If you can't give enough

of them, then that's not worth a lot either, because then the war fighters, should I use it once this time or not? You got to get a lot of these things.

Carla Babb:
Well, there are some startups like—

Dan Jablonsky:
Like ours. Yeah, we've flown multiple times, hypersonically with Stratoaunch, and we were scheduled to fly a hypersonic yesterday, but we got pushed out because the ranges got shut down during the shutdown and everything got backed out by like 90 days. So Reagan [National Defense Forum] last year, I told my team, I said, I want to fly a hypersonic vehicle before Reagan next year, and I want to be able to go to Reagan and say, we did it and we haven't done it yet, but it's on the test stand. It's got over 250 full mission cycle tests—250 tests, several of which have been full mission cycles and it's ready to go down range and it's ready to start flying.

Carla Babb:
Well, since you kind of teed me up to that, mentioning the government shutdown, we've been talking about all this new tech and all these things that we want to do, and then we get in our own way. We have CRs [Continuing Resolutions] all the time that are hindering the use of, you know, the ability to advance our systems. We shut down for over a month and CRs are costing, I heard two billion a month. Is that accurate?

Mike Rounds:
I've heard as much as five billion.

Carla Babb:
Two to five billion a month.

Mike Rounds:
Yeah, it would be a lot less expensive if we would simply do the appropriations process this year. We would spend less money than if we're having a continuing resolution.

Carla Babb:
So here you have an audience member tell our senator what CRs are doing in advancements of our new technology. How much is that hurting you guys?

Randy George:
I mean, I think Senator Rounds kind summed it up earlier. I mean, problem is you can't go after the new starts, you can't make the changes. And I think there's things that we

need to continue to do. I'm all about as two year budget or longer, we're working on multi-year funding over certain things that where I think we know that we need to do it. So I think there's a little bit of work to do on both sides. But yeah, it puts us behind. And I think, I can't remember who it was this morning, maybe it was OMB [Office of Management and Budget] director was up here, "the one thing you can't get back is time." And so that's what every time it's like, "Hey, we got to get moving. We got to get moving." And that's where I think it hurts us the most. And it's really hard on the organization too. I mean, you can imagine if you don't know, "am I getting any money? Can I do this? Can I do that?" So it's a lot of organizational toll I think too, trying to figure that out for us, for industry, really for everybody.

Jim Taiclet:
And there's an important irony here where people think, “Oh, the defense industry is Northrop Grumman, Lockheed Martin, Boeing Defense, et cetera.” It's mostly medium and small businesses all across the United States. And so you want to bring more of those in or bring more startups like Dan's company in. And you have this kind of business operation where your customer is not paying you. Actually, it's not the intent that they don't pay the invoices. There are no people in the building to pay the invoices.

So these companies aren't going to be able to collect revenue and cash and you want to bring more of them in to this industry? You're actually driving them away with these kind of behaviors on the government side, CRs, canceling programs, those kinds of things that the way the FAR [Federal Acquisition Regulation] is written and implemented, it is a decrement to most companies in the country that are in the DIB [Defense Industrial Base] because 80 to 95% of their business is commercial and five to 15 or 20% of their business will be for the Pentagon. And they're going to be like, “Wait, I'm going to invest or get into or get out of a product line or try something new with Dan. I don't know if I want to take that risk as a company because of things like this.”

Carla Babb:
And that's how we see the supply chain shrinking and then that causes problems—it just keeps piling up. In the last five minutes, I want to try to get two questions in. I want to talk about—and you guys just all jump in here—on drones. How is the Army going to get to a million drones in the next three years? And then with Lockheed, just to follow up on that, you focus on more expensive drones. How do you scale to also be able to provide what the Army needs?

Randy George:
I come from a farming community. Farmers use drones, fire departments use drones, police departments use drones. We are not producing enough drones in this country for

all of that. And so that's part of what we want to be able to do. And we've been working this with the Hill on SkyFoundry, is what do we need to do in our industrial base to help as a public private partnership to build the kind of things and help with brushless motors, wiring harness goggles, this the different antenna. What are the things that we can do to help that I think we have as far as the software, the innovation and all that will come. So I think—this is back to again, the NSS [National Security Strategy] and the defense industrial base—how do we grow that so that we have the ability to do that?

And it's going to be the same thing on the Army's in charge of counter UAS. We've helped—Secretary Hegseth assigned us for counter UAS, and it's the same thing. We're going to have to be able to have the kind of materials that we can rapidly scale, do it very quickly. And I think it will help with all of the businesses up here. So we talk about the million—

Carla Babb:
Are you solving that problem?

Randy George:
Yes, we are working very hard on that. Part of this is just getting after—and I think Senator Rounds mentioned this earlier—is like what's the demand signal? And I think that that's either industry needs a demand signal and we got to get out there and do that.

Carla Babb:
Well then the critique is that we have these big expensive counter UAS systems to knock out something that's costing a fraction to make. So how do you—

Randy George:
I mean, that's where I think you iterate and you don't buy. I mean now we have systems. There's kinetic systems right now where they're costing four or five thousand and they have a range of 40 to 50 kilometers, which is—we're moving in that direction very quickly.

Jim Taiclet:
And I would say that there's a mission set which is infantry substitution or infantrymen augmentation, which General George is speaking to now. But a drone is not, a drone, is not a drone, either. And so if you go to the other side of the spectrum and say, what is the mission I'm trying to get done? That's one infantry, I'll call it infantry augmentation. But there's another one close to that which is air evacuation, battlefield air evacuation. And what that brings into the equation is for any vehicle or autonomous system there is

the key elements of range, how far can it go? Payload, how much can it carry? And survivability, can it live through getting to where it needs to go? And with the drone counter drone, especially on the small tactical drones, that's going to be another cat mouse game.

But you still need, if we're going to do the air evacuation mission out of a contested logistics environment or resupply in a contested logistics environment, what we use today generally is a Black Hawk helicopter for that in the US Army often. And the Black Hawk is big, it's got two and usually one or two other crewmen in it. But what we've gone ahead and done, because you can be a big company and innovate too once in a while, is we've created something we call the U-60 and the U is the uncrewed UH-60 helicopter. And what that machine can do is actually takes the entire cockpit out, gives you an additional loading space in the helicopter and all the human systems come out and it's much lighter. It can carry more. And you can now use that for contested logistics. And the thing about that is you don't need to buy a new helicopter to do this. You could actually reverse integrate this into the existing fleet.

So there are going to be some new low altitude air vehicles coming into the Army. There may not be a need for all the legacy Blackhawks. You could actually convert these things and $5 million is real money, but you could actually take $5 million and convert each of these things to an autonomous drone and we can fly it in front of you right now and we could give General George

Randy George:
Seen it.

Jim Taiclet:
You've done the tablet, have you done it? So you could fly this thing from your couch, you could pre-program it.

Randy George:
I even could fly it, by the way.

Jim Taiclet:
And you can be on board and fly it. And we have other versions that are pilot optional. So if you've got some lethal force mission you need to do and you want a pilot it in the cockpit to look and see what he's shooting at with the missile or whatever, then we have that version too.
So this is really important concept if you're looking at the mission lens through the Z axis, and you could say, I'm going to have contested logistics now that I didn't think I was going to have five years ago. I can use firmware software, autonomy, AI to take a

legacy system and not have to buy a new piece of central hardware and I can make that system be better in this new environment. And that's the thinking that needs to come. And General George has been a leader in this by the way, and he and I have talked about this for two years now, I think. How do we do these kinds of augmentations?

Carla Babb:
I'm going to ask one final question, 30 seconds each because I know you all want to talk about this Golden Dome since we're here at Reagan. How do you make Golden Dome the most effective so we don't have a lack of a follow through like Reagan had with the Star Wars idea of the 1980s?

Randy George:
I would agree with Dan. I think [General] Mike Guetlein, we first picked the right people to be in charge of it, give 'em the right authorities to make sure that they can do it and resources and the Army's going to play a big role in that. I think what we're also going to get into a lot of things that are going to help us back with what we're doing for integrated air and missile defense. So I'm encouraged by it.

Dan Jablonsky:
You iterate very quickly. You don't try and build the entire thing and let it sink under its weight of the financial and the engineering problems. You pick different parts of the problem you want to solve, you solve 'em as quick as you can and you move on to the next one. You move on to the next one, you come back to the other ones and iterate again and make it better. And if they do that, they'll stay within budgets. They'll get a lot better technology faster and they'll get capabilities on orbit more quickly.

Mike Rounds:
The B-21 program was the most effective that we've had most recently. It was on time, on target, on budget. It was because of management and the fact that they said, "This is what we're going to have to begin with", and they stayed away from multiple changes on it. You have to do the same thing when it comes to the Golden Dome. And one last thing, we have to recognize the need for spectrum, and the protection of spectrum for Iron—or for Golden Dome.

Jim Taiclet:
Yeah, that's a critical point. And I just add, we're going to need to marshal all of U.S. industry to contribute to this program. It's so big and so ambitious that we need companies—you know, we've partnered with some of these, I'm allowed to say their names, Nvidia, IBM. These are the leaders in their industry, Meta for artificial intelligence models, et cetera. We need to find and make it accessible to big

commercial companies, small commercial companies, startups, and the existing big aerospace and defense companies. Because if you don't have all of those together, marshaled together, working on this in a flexible way, it'll be really hard to execute.

Carla Babb:
Well, gentlemen, thank you so much for this fascinating conversation. Let's give them a round of applause everybody.

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