Reindustrializing Defense: Recapitalizing and Revitalizing the Industrial Base

Moderator:

- Mr. Mike Stone, Reuters News

Panelists:

- Admiral Daryl Caudle, Chief of Naval Operations, U.S. Navy
- The Honorable Michael Duffey, U.S. Under Secretary of War for Acquisition and Sustainment
- Mr. Steve Parker, President and CEO, Boeing Defense, Space, and Security
- Mr. Chris Power, CEO, Hadrian
- Representative Rob Wittman, U.S. House of Representatives, Virginia, 1st District

###

Mike Stone:
I'd like to introduce the panel here. So Admiral Caudle, Mike Duffey. Steve Parker from Boeing. Chris Power from Hadrian. He's the CEO of this company that makes really impressive manufacturing equipment. And then Congressman Rob Wittman all the way at the end, from the great state of Virginia.

So we're here today to talk about something that's not just urgent, it's existential. Seven weeks ago, now eight, the Secretary of War put it bluntly. Our defense industrial base has atrophied from 51 prime contractors after the Cold War to just five, six. If you see Chris Kubasik, he'd argue he's the sixth. We're building exquisite systems at low volume and we're struggling very hard to find these attritable systems as our adversaries are scaling production at speed.

This panel brings together the people who are actually doing something about it from the Navy shipbuilding priorities for the Pentagon's transformation strategy, from Boeing's

production lines to Hadrian's Advanced Manufacturing, and from Congress, the oversight and funding that makes it all possible. The question isn't whether we need change. The memo made it clear. We're on a wartime footing now. What does this mean?

So I'll open this up to everyone. The November 7th memo identifies three systemic challenges: fragmented accountability, broken incentives, the government behaviors that disincentivize industry investment. What specific production bottlenecks are most critical to address in the next 12 months?

Rob Wittman:
Well listen, I'll start. I think one of the most impactful ways that we can break up these bottlenecks, open things up, is what will happen this year in the National Defense Authorization Act with acquisition reform. We want to make sure we get to a fast track to be able to acquire. Today, the acquisition process with the requirement writing and actually fielding of these systems on average is 800 to 900 days. This year's NDAA is going to bring that time down to 90 to 120 days.

If you look at what happens in how we take risks today, there is no incentive to take risk. We want to make sure with these new processes that we are taking risks and we're highlighting what we learn from taking those risks. We understand that there's going to be some failures. Congress's job is to make sure that when there is risk taking, when there is failure, that we speak out very loudly, not about what the failure is, but what did we learn from the failure?
How are we advancing the things that need to happen with these bottlenecks that really get us to the point where we can function at the speed of relevance? That's going to be key.

I look at this year's National Defense Authorization Act, which combines the SPEED act out of the House and the FoRGED Act out of the Senate to really be on the same level of impact as Goldwater-Nichols [Act of 1986] was to the military years ago. That's how far reaching this is. And when you combine that with a change of mentality and policy within the Pentagon and what the funding stream is going to do with the reconciliation bill, I do think we're at one of those tipping point moments where those bottlenecks are going to be broken up. And you have a number of folks here on this panel that are at the cutting edge of how to break up those bottlenecks and how to really put capability and develop capacity at the speed of relevance.

Mike Stone:
So, Mr. Duffey, that's a question for you.

Michael Duffey:
There is no shortage of bottlenecks and we've got a lot of work to do, but I thank the Congressman and the Congress for their leadership in establishing an environment that drives change. I think Secretary Hegseth and President Trump have embraced that and driven their own sort of imperative to the Department. And Secretary Hegseth's speech last month did a great deal to start to get after laying out the path forward of how we can do that.

When you talk about fragmented accountability, broken incentives, disincentive for industry, I think we've got a lot of solutions that we've laid into that strategy that we're already getting after to resolve that. Number one, the creation of the portfolio acquisition executive, A shared interest between what Congress has promoted, what we believe, and I think what industry sees as necessary is consolidating decision making in those officials within the Department who have the singular responsibility to deliver capability on a fixed schedule so that we can get equipment and systems and weapons in the hands of the war fighter with a priority for schedule.

We want to maintain performance, we want to hold costs down, but schedule is the name of the game when we are looking at the threats that we're facing. I think also—and I think we'll talk about this quite a bit this morning—incentivizing industry takes the confidence that there's going to be a steady demand signal and we've been working very aggressively with the industry to help create that incentive to invest their own private capital to help expand the capacity that we need.

Mike Stone:
So OMB [Director Russell Vought] just said in the other room that budgets are going to go up. They haven't made a decision on reconciliation. I'm sure everyone saw that, but there wouldn't be a hole. So as more money gets pumped into the system, you have to make fewer choices, right? The tide will go up.

But I wonder if Boeing might be interested in commenting on whether or not these tough decisions are going to erode your viewpoint for the next year?

Steve Parker:
No, not at all. Let me come back to a point that the Congressman made. To me, this is about leadership. So in the U.S. we have a system today which is a compliance-based system. There is no real incentive to take risk in the U.S. government, and that's really what has to change.

And I'll give you an example, a real time example from this year, Lieutenant General [Dale] White, the MilDep [Military Deputy] on the USAF side, on our T-7 Red Hawk program. We could have kept testing that aircraft in areas that made no sense for the United States Air Force from a training perspective with AETC [Air Education and Training Command] or we could make some changes. And that's what we did. He listened to his customer, we developed a memorandum of agreements and we tailored our testing to be able to get the capability to the ramp.
So again, the question here really is who is the customer? Is it the contract? Is it the warfighter? We delivered that T-7 Red Hawk aircraft to Randolph Air Force base yesterday with no change to safety or quality, no change to the contracts. We just merely changed the approach to get capability on the ramp. And I think that's a big deal.

And then when it comes to incentives for industry, and Chris may talk a little bit about this, it's really sending a demand signal. So I think the Department, in all of my conversations this year with the Department, I'm really, really impressed with the vision of these longer term contracts. So how do you send a signal to industry five or seven year revenue stream to get industry to invest their own capital? Or if you're a smaller supply chain company, how do you go out to VC [Venture Capital] or private equity to get that established? So I think we're in a good spot here and I think a lot of this is the change in approach from the Department, Secretary Hegseth, with the arsenal of freedom, changing the acquisition reform. That's what we need. We need to change things up, but ultimately it's the leadership from my perspective.

Mike Stone:
Secretary Duffey, are you going to increase the number of multi-year buys from the current number in this coming 2027 budget requests?

Michael Duffey:
Well, that requires the consent of Congress, but we've had very promising conversations with Congress over the last several months about the need. And I think there's a very receptive audience to the idea that we could increase the number of multi-year procurements that would give that stable demand signal. I think industry's gotten accustomed to the Department and the taxpayer and the Congress funding capital expense. And we want to do everything we can to pivot that back to industry because not only will that kind of optimize or put the burden on industry the way we've succeeded in the commercial sector, but also I think incentivize industry to really optimize their production as they have the ability to profit from each additional gain that they make in their production capacity.

Mike Stone:

This really plays into Mr. Power's hand. He's got these machines that are—please explain—how can your company help create surge capacity that doesn't sit idle and become obsolete during peace time.

Chris Power:
So we build highly automated factories across all domains, whether it's machining, casting, forging, assembly, which is by its nature dual use. And I think people forget that the surge capacity we had in World War II was the whole commercial industrial base, which we then promptly offshored. So there is no surge capacity because the only supply chain jobs, the only manufacturing outside of SpaceX and Tesla largely is the primes, like Boeing and their supply chain, and Raytheon, and Lockheed, and everybody else.

So there's no real slack in the system if you even double the demand, you've got this cascading thing of like, “okay, well now these guys at Boeing need double the floor space tomorrow.” Unless you've invested two years ahead of that, then supply chain needs to do the exact same thing. The fundamental bottleneck I think is actually the skilled labor in the country. We offshored all the jobs. Most of the very highly skilled workforce at any of our companies, except for Hadrian because we've automated a lot of it, so that we can use train anyone in 30 days and they operate at an expert level kind of powered by AI and robotics. And we need to produce that capacity to have the workforce to do it because we offshored all the jobs.

I think the fundamental bottleneck and we see this in shipbuilding is like, my friend over here could give me a billion dollars to hire a million welders and we probably could not do it, no matter how much money we spend. So you have to have high levels. I think it's going to come down to the labor.

In terms of your question on incentives and where are the bottlenecks. This is kind of not how production works. The answer is just start building the plane and then you've got a thousand suppliers and one of them hits and you just got to kind of, Gwynne Shotwell and Elon [Musk] have this really good phrase, which we have at Hadrian as well, which is like production is just hell. The only way to actually figure this out is to just go and where are the bottlenecks?
Okay next day.

And let the primes and companies like ours have the ability to just hit them. Because you pre-plan this in contracts, you really can't. There's no amount of forecasting. And I think what is actually going to drive that through the NDAA is that schedule has primacy because there is a huge difference in how you operate, how much you pay your

suppliers, how much you pay your workforce. Am I getting something in two weeks versus 12 weeks? If you only really care about, yeah, let's hit this cost target, but it needs to be delivered to the war fighter on December 31st and you're going to make very different decisions and if we get the schedule primacy through the system, everything will kind of sort itself out. Everyone's smart enough to do that.

Michael Duffey:
If I can jump in on that, Chris makes a great point in that I think a key piece of this acquisition transformation is the recognition that there are things that industry does better than government. We don't have to analyze the supply chain down to the nth tier as much as I would love to have that, because industry can iron those kinks out if we give that stability of demand. And then when it comes to innovation, I think that whether it's the reform of JCIDS [Joint Capabilities Integration and Development System] that Congressman Wittman had mentioned and the Secretary Hegseth championed in his speech, a recognition that innovation is no longer priming in the Pentagon, but actually in industry to create, and what is our role inside the Pentagon in setting the demand signal to industry to give them the flexibility to innovate and bring new solutions into the government.

Mike Stone:
Admiral, we've talked about speed, we've talked about dual use, we've talked about potentially having quality come down a little bit. Is that troubling to you?

Daryl Caudle:
Well, all this is a massive undertaking what we're trying to talk about. So let me kind of start maybe how we kicked off with the acquisition reform and get to this question.

If you look at acquisition reform a bit as kind of the strategic level initiative. Then to me there's kind of an operational level, then a tactical level. And if you think of those as kind of gearings that have to be clutched together with some kind of pinion gearing between them, it won't do much good that I do the acquisition reform without improving the performance of the actual industrial base itself. And then if I turn that really fast and I can't integrate that into the actual war fighter at the right pace, then I can't bring it to bear. So there's a DOTMLPF-P (Doctrine, Organization, Training, Material, Leadership & Education, Personnel, Facilities, and Policy) piece that's got to be synchronized to the delivery piece, which has got to be enabled by the acquisition reform piece.

And so if you don't go holistically across all of that, then you'll be building me a bunch of stuff. I don't know where it's going to go. I don't know how it's going to be maintained. I won't know how to train sailors how to use it. Okay, so one big start is I think we have to

think about bridging. We need to bridge across these different time epochs until we get healthy across all these three things that I've talked about. And so how do I do that? So I think a couple of things have been mentioned. One is leadership and workforce. If you think of the difference between the arsenal of diplomacy and today I have better tools, better CAD, better CNC, better visibility, and yet we're still way behind on all the contracts that I have with almost everybody.

So isn't that an indictment really on people? Isn't that something about we're not doing something right or the way we train, retain, get talent, oversee them, culture, all of that is I'm very concerned with. And so, first step in this bridging is just deliver what I've got on contract. That would be Herculean. Why we get this acquisition reform, which is much needed. That's an issue. The way I think you scale that is of course competition in which many places I have very little, so that's a problem. There's got to be some bit of capacity building. And so if you think about we talk about ship building, I can just beat the child that listens a little bit with my two main contractors to build submarine, but one could argue that's fairly topped out moving the tool chest closer, giving 'em an iPad that's not going to give me the 100% increase I need.

So I've got a capacity issue that has to be addressed. And then the last thing is quality. Quality has to be engineered into this. We've got too much “just in time” heroic effort going on in our business. So we've got to go get a process—this is kind of Deming 101, red bead experiment stuff that I just bake in these things that give me the quality. So that helps with testing, which is very laborious and hard to do. Too many waste steps in how I move things around. And so all this quality piece has got to be fundamentally changed to deliver this on time. So I just think these time epochs have got to be looked at on these reforms to bridge across some different innovative ideas to deliver what I've got on contract. Let me clutch that into the DOTMLPF-P appropriately, and then work on the acquisition reform for the long-term, the long-term piece of how we do defense.

Steve Parker:
And if I could just pull on the quality aspect, I mean I think the Admiral's absolutely correct. You sort of inferred here going fast, maybe lessening quality. We see it the opposite. So we've invested heavily in digital engineering and digital and advanced manufacturing. We're seeing improved quality. Cycle times, reducing—an example of that again is the T-7 aircraft from final configuration to first flight, 36 months. We're doing this in the proprietary spaces. We're not drilling holes, we're not reaming, we're not trimming in the manufacturing space anymore. We're using a lot of autonomy. We've changed the way we build that's going to provide a better product, it's going to provide it quicker to the war fighter, and it's going to be more sustainable in theater. If you think about battle damage, we will be able to send parts to a ship to an Air Force base to be

installed that will have holes already drilled that will just fit in. So I think industry's trying to change the paradigm here of “how do you produce at a higher level of quality with much faster speed?”

Mike Stone:
So let's stay on that for a second. Secretary Duffey, when you have meetings with some of the folks that sell into the Pentagon, do you ever ask them, “Hey, what would it take to double production?” And what do they tell you? Do they say, “we need money, we need DPA [Defense Production Act], we need investment.” What is it? And can you pull out an example? What would it take to double production of say, whatever, choose your favorite child?

Michael Duffey:
Well, I think that's in every single conversation that we have with industry these days. Actually I'll come to that. I just want to respond. I do think that in the cost, schedule, performance discussion and the trade space, while we're thinking about, “how do we optimize the system?” I want to clarify, I think there's often confusion between quality and requirements when you talk about performance, there's no intent to sacrifice quality. It's a question about do we trade a range to say, “if we could get this earlier, would we trade off an element of the range of a weapon system,” for example. And that's an intentional discussion that we have to have and we have to create the mechanisms to have those. So I don't think, to the Admiral's point, test[ing] is critical. We've got to make sure we've got the capacity and we don't want to put less than a safe, secure weapon in the hands of our war fighters. So I want to dispute that quality myth out of the gate.

When it comes to production capacity, I think you see a lot of that woven into the acquisition reform strategy. We started shortly after I was confirmed in partnership with Deputy Secretary [Steve] Feinberg, who's been a tremendous leader on this effort to think through on the munitions use case, how do we accelerate a ramped production of munitions? We see tremendous growth needs within that portfolio when it comes to Golden Dome, when it comes to recent operations. We want to make sure that we've got a magazine that's ready at any moment in time.

And so we embarked on a very aggressive engagement with industry over the summer and into the fall. We learned a lot about industry's perspectives about what gets in the way of their ability to ramp production. In some cases excessive testing. In some cases the cost and duration of qualification of second sources. Those were all embedded in the acquisition transformation strategy that Secretary Hegseth moved forward on. But I do think the first one that we found to be the most impactful was that question of can we

get a more stable demand signal over time? And that's really dominated a lot of our discussion over the last *[unintelligible]*.

Daryl Caudle:
I just want to highlight and foot stomp a bit. When I came in the Navy 40 years ago and prior to that the defense uniform members and civilians in the government were the leading experts in the tech that we were creating at the time. You can think of that as from radars to electronic warfare, nuclear weapons, propulsion systems, reactor plan design. I mean we were—even a computer, if you want to drill down to that—that has shifted over time to the folks here on the stage now have much larger capacity to tell me how to do what I need to get done much more effectively and better, cheaper, which in general also means schedules also better.

And so I don't think we've got the rudder over on bringing to bear what I need to go be very lethal and handing that over and let them kind of help me figure that out to the extent we need to so that they can give me solutions that I can field very quickly and effectively and it still meet the actual lethality requirements. So that's a paradigm shift. We're on that journey, but I don't think we've turned the spigot on fully onto that point to increase the actual brain space of who's solving our problems.

Rob Wittman:
And Admiral, I think you're spot on, and you talked a little bit earlier about two very important components of what have to happen. First of all is workforce. And it's not just workforce. We talk about acquisition reform and then we talk about supply chain, but it's not just the workforce itself. It's how are we creating the workforce of tomorrow? Because the workforce of tomorrow is not going to be somebody that's skilled in tooling or casting. It's going to be someone who is skilled in programming these systems to be able to produce things that are going to change on a daily basis. I mean, you're going to have plants that are going to produce one part today, one system tomorrow, and they're going to be flexible and adaptable. How do we make sure we're looking forward and say, “where are the workforce components going to be put together in our high schools, in our community college, in our trade schools to make sure we have a pipeline of the workers that are going to be the skilled tradesmen tomorrow?” We'll still need welders and we'll still need electricians, but we're also going to need folks that have the other skill sets.

How do we scale there? Because no matter what we do in pipelining resources or developing policy, if you don't have the workforce, the supply chain's not going to happen. And then guess what? None of these things happen. Another thing you talk about too that doesn't get noticed, and that is operational availability as the Navy terms

it, AO. You know what? You don't get to have all these ships at sea no matter how many new ones you build unless you maintain the ones you have. And acquisition reform this year, while it was quite far reaching, did not touch into the maintenance space. What are we doing to create the industrial capacity and the maintenance space to make sure all the great things we build can be maintained? Not everything's going to be inexpendable, they're going to be attributables that have to be maintained, exquisite systems have to be maintained.

Our next step next year, I believe in NDAA has to be how do we also reinvigorate the industrial base that's part of maintaining these systems. And then also, too, we can do great work now in maintenance. We can do great work in workforce, but you know what? If we don't have the raw materials for those things, we talk about reindustrialization—reindustrialization includes getting back in the business and doing something simple as mining, of refining those minerals, of smelting those minerals, and making sure all that's done in the United States. Today as we speak, there's only three smelters left in the United States—two copper smelters and one aluminum smelter. Do you realize the minerals that we mine and that we refine where we send them to be smelted? China. And then we buy them back from China.

We have got to make sure that the reindustrialization of this country is not just the military industrial base, but it's also the manufacturing industrial base, the raw material industrial base. We can do that better than anybody else in the world. We will not use forced labor and we will protect the environment. We have to get back in that business. I'm excited too about lots of investment happening in those areas.

Mike Stone:
I want to knock on to that point, which has to do with the investments that the United States government has been making in companies in the United States. If the government continues to take equity stakes in defense contractors, how do we prevent distorting competition, creating conflicts of interest in source selection, or giving unfair advantages to companies where the government is both the customer and the investor? MP Minerals, a magnets company, Intel—there's been a bunch of investments as this administration wants to get into the equity side of a company. So Secretary Duffey, where does this end?
Michael Duffey:
Well, I think I'll go back to the point that I think we really are looking to industry to step up and make investments in production expansion, in innovation, in improving the capabilities that we're going to buy. I think that primary motivator is to ensure that we are getting out of the business of paying for that capital investment. And one of those mechanisms that may be on the table is if we are in a position where we have to pay

that capital investment, that we would get something in return from the government perspective.

But from that standpoint, we have to make sure that we're attentive to all the potential risks that you identify. Our goal here is not to create an ownership structure within the government, but to ensure that we're optimizing how we interface with industry to deliver capability for the war fighter as quickly as possible.

I do want to agree with the Congressman that sustainment is key, which is why we made it a pillar of acquisition transformation, prioritizing sustainability in the design of weapon systems from the beginning, exploring ways to get the tech data package we need in order to repair systems, in process, and finding ways to maximize visibility of the supply chain throughout the entire defense industrial base. So I agree with him a hundred percent. That's a key component of what we need to prioritize

Mike Stone:
The two companies on the panel. Can you talk about what you're seeing? These equity stakes that the government's been taking and how that makes you rethink your meetings with your investors and your bankers?

Chris Power:
I can, since I'm probably closest to the pole here. So I think what we're seeing since we're connected to all the investor base, so I'll talk in generalities, is I think there's two categories. There's categories like rare earths where the market really doesn't exist. There needs to be a demand signal created so private capital can come behind it with a huge offtake agreement. In those kind of strategic capabilities where unless it was kind of government backed, you honestly wouldn't have the rare earths—and they're not rare, we just need to get rid of all the regulations.
That makes a ton of sense because otherwise we're not going to have the capability. And what I think is completely fair is like, “Okay, you kind of assessed 10 companies, you're picking two of them.” We should always pick two or three, not one and create that competition stability we wouldn't picked. And then, “okay, we're putting a billion dollars into this company and the company valuation is going to go up 10x and the taxpayer gets a return.” I think this is great.

I think the second side is where do some of the companies need this big push? So then the base can then take over the revenue stream. And I think what the Secretary has done, what a lot of the Department is wrapping their heads around in terms of long-term demand signal is, “Why is the government paying for CapEx [capital expense]?” The

answer is basically very simply for production. You can think about this as a SpaceX analogy.

The Falcon 9 factory doesn't exist. It takes two years to build If we're doubling Falcon 9 capacity. So what do you do in the interim two years? At the start of year three, you're now selling Falcon 9 launches. There's plenty of revenue from that factory. What do you do? You have to use government dollars to bridge that or create such a huge demand signal that we can put $1-2 billion in CapEx in the ground. And if there are scenarios where, “Hey, that capability is going to take a long time to create,” or it's incredibly risky so that the private markets can't underwrite it, and the government's stepping in and saying, “Hey, I'm covering you for years one and two before the prime or the government then buys that offput from the massive factory expansion.

It's completely fair from our perspective in the commercial world. If you were selling software and everyone—Salesforce, one of the biggest software companies—and Mark Benioff turns around to you and says, “You're currently doing $10 million revenue and I'm going to give you a billion dollars in revenue,” you would probably take a stake in that company.

I think this is kind of completely fair. I also think we're forgetting when we did the World War II ramp, you kind of had to pick 30 crazy people to just get after it and make them national champions because right now it's basically private industry versus the CCP and private industry combined as national champions. I just think this is a very American way to do it.

The other thing I'll say is all of these companies are taking enormous amounts of risk underneath that. Most things that I've seen in this kind of trade space are, “Oh, we'll pay you if you're successful, but you're actually going to put the first $500 million in.” The government's not actually paying for this until it's successful and there's a lot of risk sharing going on under the hood. I think it's extremely healthy as long as it doesn't become kind of, “Hey, we wake up in 10 years and we just created 10 new companies that have got a lot of dirty tricks baked into the system to keep the competition healthy.” I think this is completely reasonable, especially this production ramp we’re about to go in. It's kind of the only way it's going to happen.

Mike Stone:
Mr. Parker, how do equity stakes change your outlook?

Steve Parker:

Well, I think it's a legal minefield. But to me it really only applies in the supply chain, particularly smaller companies coming through that might be a way forward for them to get some equity without going out to raise private equity. I don't think it really applies to the primes.
Now that being said, this is really about, will industry invest ahead of need? Really what it boils down to. On our PAC-3 Seeker line, so you asked before Secretary Duffey about doubling and so forth production, we built a facility well ahead of need and spent a hundred million dollars in Huntsville, Alabama because we saw a demand coming. That's what industry should be doing. That's what the government wants the industry to do. Put some skin in the game, invest, and make sure that we can have the capacity with where we think it's going.

We've also used our own company funds this year to supercharge the supply base. So again, we consider the demand signal coming. Let's get out, look at our suppliers, “Who needs some injection?” We're using our own funds to start them off. What we'll do is we'll go from around 650 Seekers this year, which is the most we've ever produced in their history of PAC-3 Seekers for our customer. We're anticipating going to 2,250 by the end of 2028, 2029. So that is a massive increase in capacity. And my example here is in this case, the Boeing company is investing ahead of need. And I think at the end of the day in the scenario whether you're a prime or you find yourself within the supply chain, there will be winners and losers. And people will be judged on, “Are they all in against the threat to make sure that we can get capability out to the war fighter or are we going to sit back and wait for the government to pay for things like CapEx?” So I think it's a really interesting question. I just gave you an example. I could give you a few more of where my company's stepping up and moving out in advance.

Mike Stone:
I think you might've just committed news. I'm sorry, did you say you're going from 650 to 2,250?

Steve Parker:
That's the plan. If we get the signals from the government where we're ramping up right now to be able to go up to a very, very high demand and we'll see where the government wants us to go. But I'm not waiting for that. That's my message.

Mike Stone:
So the reason they're going to 2,250 is because the Navy wants to put PAC-3 onto its ships. So can you talk about—this is something that's not written yet. I've written a story about it, of course, that's why I'm telling you all. But this is the future ship defense. It's been effective against Russian hypersonic missiles or the Patriot’s been effective

against, or the PAC-3 interceptor's been effective against Russian hypersonic missiles in Ukraine. So there's a move to put these aboard ships. This has got to be something that defends the carrier strike group. And then let's start talking about F/A-XX.

Daryl Caudle:
Yeah, can I go answer one other thing before I get to that? And I'll answer that, but I do want to hit the workforce piece. I want to comment on that.
I do a lot of visits with a lot of shipyards, a lot of places where we do production. And when I get there, what I see is a lot of people standing around to be quite honest. And when you go probe into that, it's because the coupling of the production and the actual work, the specific thing these workers do, is not matched very well. And so to me, when I go to places that really are firing on all cylinders, what they've done is made their workforce very fungible. It's not actually specific welding, or pipe fitting, or electrician. I engineer out that a bit. And I do that through digital design improvements, automating a lot more with robotics on the work floor and the production floor. And so we need to get out of, making something everybody does a specific thing, because it's impossible to couple that well to the production schedule. Make people more fungible and improves leave and management of human quality of life, and all that. And so I just think that's the thing I want to address is bridge toward more automation. And I think that will help with that.

With regard to PAC-3 or any other lethal point defense system or whatever that might look like. There is always an initiative I have, from directed energy all the way up to the high end standard missile design, to be able to couple the actual threat to the payload and to optimize that. So what some of these smaller missile systems have done—and we've deployed with this on some of our strike groups where we're a bit upside down on the cost curve on a one-way UAV and taken that out with an SM-6—that's not a place I want to be. I want to be, some low cost missile systems that falls into that have the right range, reliability, and capability that I can bring that to bear. Directed energy has to be part of that infinite magazine, if you will. Electrical power is part of that, of course. So at any place in the future where I'm doing kind of high value unit protection or point defense protection, I don't want to waste my main offensive battery to do defense. And so that's what this is tied to. We optimize our Navy when we do that. These types of solutions help with that.

Mike Stone:
So F/A-XX, do you believe that the Navy should buy a next generation fighter?

Daryl Caudle:
Of course I do.

Mike Stone:
Oh good.

Daryl Caudle:
On what planet would a Navy chief not think I need the highest end aircraft possible on aircraft carriers?

Mike Stone:
When should we expect that decision?

Daryl Caudle:
In fact, everything about that plane is better. It's already even with the advanced capabilities of F-18 and F-35. The time it takes to build an airplane from the time I'm on a napkin until the time I'm flying it off an aircraft carrier, I have to make decisions now to get that design locked in and actually produce that because the threat curve is moving at that pace. So the aircraft carrier—and there's discussions about survivability and those types of comments—but in no world that what flies off of that shouldn't be the highest end platform possible to penetrate deep into a weapon engagement zone and have confidence with longer range munitions that it can close that kill chain.

So it's of course something that I'm an advocate for. Does it need to be done in a cost effective way? Does it need to be done so it doesn't clobber other efforts? Does it need to be done so it actually delivers in a relevant timeframe? Yes, yes, and yes. So hopefully some of this acquisition reform and production improvement can help us get those decisions made.

Mike Stone:
So let's just set the table on F-A-XX for a second. So during the tail end of the Biden administration, there were two next generation aircraft that were being competed. One became F-47, the other one F/A-XX, the Navy, the carrier variant for the sixth-gen[eration] fighter. That was ready and it was created. It's a competition that's currently between Northrop Grumman and Boeing. And the decision, per my sources, has been ready since March.

So what month is it now? December. Alright. And we're still debating it now. The debate focuses on just what the admiral said: Can we make it? Can we make it on time? Can we make it under budget? So I'll open this up to everybody since we all talked about it back in the green room. Rob?

Rob Wittman:
Listen, I agree with Admiral Caudle a hundred percent. We need F/A-XX. F/A-XX is a critical element of a carrier strike group. You look at the next generation air defense, the NGAD system—F-47 is the Air Force version, F/A-XX is the Navy version—by any measure we need it. And we want to make sure the decision is made quickly. In fact, I would argue Congress has made the decision. Congress has done the direction, Congress has done the authorization, Congress has put in the dollars in the reconciliation bill. Congress is putting in the dollars in, not only the authorization, but also in the appropriations bill here in the House, and likewise in the Senate.

So there's a clear demand signal coming from the Congress to say, “F/A-XX is where we need to go. We need to execute that as quickly as possible.” So I don't think there's any ambiguity there.
I think it's a matter of, if there are questions to be asked, then ask them quickly. But let's get underway to produce this aircraft so we can get it on board the deck of that aircraft carrier. Because I can tell you, the adversary is not waiting. The adversary's next generation aircraft is going to have a capability that we have to counter. The way we do that is with the F/A-XX. And remember, too, the whole concept of operation under NGAD is not just a crewed fighter aircraft, but it's also an uncrewed aircraft. The CCAs [Collaborative Combat Aircraft]—the only way you enable the CCAs in that transition period, everything is not going to go from crewed aircraft to uncrewed aircraft. The transition is going to be those crewed aircraft using the uncrewed aircraft, the CCAs as the force multiplier. The way you get faster to the unmanned element there is to make sure you get F/A-XX not just in production but on the decks of aircraft carriers.

Daryl Caudle:
Can I add one thing to that? I would also say that a Navy has global responsibility and we're going to really focus, of course, Indo-Pacific. That's the pacing threat, and there's no question that's in play, but I do have global responsibilities. The challenge is in today's world, the cost of entry to become a threat to a high tactical aircraft continues to lower. So in rest of world, which you're going to imagine that I want to deploy aircraft carriers around the globe to give the President options against countries that aren't near the capability of near peer and peer adversaries. But because the cost of entry to actually take out the existing aircraft I have today is lowering, I have to stay ahead even of that curve. So of course this is a vis-a-vis China issue. This is vis-a-vis rest of the world with the cost of entry into capabilities surface-to-air and air-to-air is lowering and lowering.

Mike Stone:

The Chinese are building aircraft carriers and they're building sixth generation fighters. What's the timeframe that you need to have a carrier variant fighter?

Daryl Caudle:
Today.

Mike Stone:
Okay, Secretary Duffey, how's it going?

Michael Duffey:
Listen, I think there's recognition of the need for us to maintain pace with the adversary in the maritime domain to ensure we've got the sixth generation fighter. I do think we are. And speed is absolutely paramount. Speed does need balance with ensuring that we can manage our programs, right? So F-47 is a little bit different. We had almost 10 years worth of prototype flying. Now the F/A-XX may benefit from that, but that's a different approach to the strategy. So I do think there's a commitment for us to deliver this capability. There is an interest to make sure that we can, from our standpoint, that the industrial base is able to support it. And I think we'll be working through that question as quickly as we can.

Mike Stone:
So you don't think the industrial base can support it, is that right?

Michael Duffey:
I don't have an opinion right now. That's one of the things that we're working through to ensure that we do.

Mike Stone:
Mr. Parker, can the industrial base support it?

Steve Parker:
Let me see. Yes.

Mike Stone:
Okay.

Steve Parker:
Look, when it comes to F/A-XX—first off, let me just say, F-47 awarded to Boeing in March of this year. We're super humbled to be trusted to develop what will be the most advanced sixth gen fighter capability for the United States Air Force.

When it comes to F/A-XX, we've also burned down a whole bunch of risk. And I'll talk for industry writ large here, I'll talk for Northrop. We have both burnt down a tremendous amount of risk. F-47 starts off with an unprecedented level of maturity. Now, we've had a pause, the Department of War is thinking through things. We're going to be poised to move fast. So even though we're taking our time upfront, once that decision is made, if it's a go, we will move with speed, we'll be ready. I think my industry peers would say the same. It is a transformational capability. Can industry do both? Absolutely, industry can do both. Do we think this just resides in China? It doesn't. We have some of the best and brightest companies, minds, engineering minds in the nation. And look, I won't comment for the Department of War or the Navy in terms of the classified nature of the program or the threat. But the need is urgent. It is needed now. The technology exists and we're ready to go deploy it if we get a go.

Mike Stone:
So what we've been talking about is an exquisite system. You can't lose these. Let's talk about things that are attritable, right? So we're in a bit of a paralysis on F/A-XX. Its cost—there have been at least two contract extensions since this early part of this year. I believe that those contract extensions, which are across two companies, cost tens of millions of dollars each. Maybe it's $30 or $40 million per contract extension. So what's the total number that we've paid to have extra decision time? Do we know Secretary Duffey?

Michael Duffey:
I don't, but I don't think those companies are sitting idle either. There's a lot of work to be done and that money is not just kind of keeping things idle. Steve can correct me if I'm wrong, but that's my view.

Mike Stone:
It costs money to give more extension time.

Steve Parker:
But I think just let's just bring it back to, “How do we go fast,” to the real comment of the conversation. Boeing is building $10 billion of facilities in the U.S. $4 billion on advanced classified facilities for these types of—and in some cases we made those decisions before the F-47 program was awarded. So again, it just reinforces, “Is industry able to invest ahead of need and take some big bets?” Industry is. The Boeing company certainly is. We're expanding our facilities in Charleston as well. We built new facilities for MQ-25 [Stingray].

So I do think there is a fallacy out that the industry won't invest. At least when I speak for the Boeing company, we're investing in a big way to position ourselves from a CapEx perspective to be able to meet the needs of the war fighter. And along with that comes the supply chain. And along with that comes our workforce. How do we skill differently? How do we work with suppliers differently? How do we take some of the technology that Chris and others have from an autonomy perspective, advanced manufacturing? I think the future's bright here. I hope a decision gets made soon and we'll be ready to go.

Mike Stone:
Secretary Duffey, there's a lot of talk about prototyping and how you want to lean into new capabilities through prototyping. And then can you talk the people in the audience through how you want to scale those new whizzbang things that you, Admiral, get excited about that prototype and you want to move out rapidly and not just buy 10 but 10,000 or a hundred thousand. Can you tell us about the scaling issue?

Michael Duffey:
Well, I think prototyping is just such a tremendously powerful tool. When we talk about—and I appreciated the Admiral's comments about the fact that, once upon a time technological innovation was prime in the Pentagon and no longer is that the case. And I think we're really struggling to wean ourselves off of that mentality. And I hope that acquisition transformation is the catalyst to do that. I think prototypes are the greatest invitation to bring industry into that discussion and help the Pentagon understand what's the art of the possible, demonstrate that there's capability because there, deserved or not. tends to be some skepticism. If there's an idea, can industry actually deliver on this? The prototype is the first attempt at that.

And I also want to recognize Admiral's comments on the need for DOTMLPF-P, and ensuring that we have, of course, a great whizzbang technology is not very useful if it doesn't integrate, if we can't sustain it, if we can't train our folks on it. A prototyping environment where we can bring those prototypes into the environment can be a really powerful exchange between industry and government to ensure that both sides understand what's required in order to deliver capability, including all those very DoD unique requirements that are hard to replicate if you haven't worked inside that environment.

And so I think I'm excited about prototyping. I think we identified it as a replacement. I don't think we'll fully replace the analysis of alternatives process where we take time to think through the very big decisions where we're going to make tens or hundreds of billions of dollars of commitments. But when it comes to anything less than that and

where commercial and a private sector has an opportunity to introduce new innovative technology into the system, this is a great way to do that.

Mike Stone:
Rob? Admiral, do you want to say something about prototyping?

Daryl Caudle:
Yeah, one quick thing on prototype. I agree with everything the Secretary said on it. Prototyping even has some deterrence value because our adversaries see us leveraging these new capabilities. It lets fleet sailors and joint force personnel actually start utilizing it quickly to ring out the tactics, techniques, procedure, and doctrine with it.

I think the problem is that what's not being prototyped is—I'll call it fleet because I'm Navy—fleet introduction. So that needs to be part of the prototype too. We tend to think of prototyping as testing out the capability and does it actually execute a CONOP or something? But part of that full spectrum prototype, is how it's going to go into fleet introduction. And so what happens with a great prototype, yeah, I love it, slap a table, go. I still don't see it for two years. It still doesn't matriculate into the system fast enough even though we know it's something we're behind and we want to get after it. So I think part of the prototyping expansion of that idea needs to be the prototyping of fleet introduction.

Mike Stone:
Congressman Wittman, prototyping is interesting because there's intellectual property that I have, so I made a special whizzbang widget. Is there a role for Congress in trying to bring those things to scale in a way that is in keeping with the market economy but maybe afford these folks a little help?

Rob Wittman:
Listen, there is, and there are things that we can do to make sure that we're encouraging ways to get this operational capability to the fleet, to the force as quickly as possible. Admiral is exactly right. You can have something that prototypes well, but then you look at it, how do you integrate that into your CONOPs? Then what you have to look at is how do you make sure you sustain that? So intellectual property is key. How do we make sure we work through that? And I think we've worked through some of the more difficult situations and things like F-18, the last production of F-18, which, by the way, just finished yesterday. So we know that we have that opportunity.

What we want to make sure too is that we're using other tools there. Prototyping is great, but making sure that you're using digital design to get there. Most everything

today is being done by digital design. That's the way to get things quickly in the hands of the war fighter. And then once you get it in prototype, the way that you are able to truncate and streamline testing is to use digital twin. So you put the prototype out there, you gather the data that day it goes into the program. So tomorrow you're running a new program, a new regime for that prototype. So you don't have to go through what used to take years of testing, now should take literally weeks to be able to do that. So you have to be able to use that.

And then we have to find that balance between how much IP does the government need to own, how much does the vendor need to own? How do we make sure too that it's used for sustainment? How do we make sure I have the IP where the government can say, now we need to produce parts for that or we need to do ancillary systems upgrade. You want to make sure people have conduit so they know the operating system. So if there are other parts of that that you have other vendors that provide things that are part of that system, how do you make sure that they have input there? And it may be that you can go to somebody different that can provide a better system that makes that combat system work. So the IP issue is still out there, but you have to be able to go to the foundational things of digital design and digital twin in order to get to that point to where now you can utilize the full capability of a system that's been delivered to you.

Mike Stone:
This is the last question I got to go across the whole board and everyone can throw in their last minute comments. This is a panel about reindustrialization. So how do we define success for industrial based revitalization? What metrics should we be tracking? We'll start with you Rob.

Rob Wittman:
Time. Making sure that we get things in a timely way, making sure that we have modular open system designs to make sure we're using what's available out there. Just as it's been said here, it used to be DoD had the repository of expertise. That's not the case today. There's a lot of amazing off-the-shelf design.

And the bottom line is this is the future of the Department of Defense is going to be software informed. Every bit of hardware is going to be software informed. So we got to get the software right, we got to get software acquisition, right? And that's going to enable every bit of hardware that comes into the hands of the war fighter from this point on.

Chris Power:

For the country, it's really simple. Manufacturing is a percentage of GDP and jobs. For programs, it's even simpler. Are there more hulls in the water on the date that Congress and the war fighter want them? Are there more planes in the air, on the deck? And we have to just keep measuring schedule. There's no amount of reindustrialization or digital engineering. The thing is, “Okay, it's going in the water. The missile is now in inventory ready to be installed.” Schedule has to take primacy. And with people who can't have a great design but can't hit schedule, then we need to look through digital twins and digital engineering, at other manufacturers who can speed them up. And it's just, is the boat in the water or not? I think it's incredibly simple.

Mike Stone:
It's simple for you. It's valuation. Okay.

Steve Parker:
Well I think it starts again as leadership. Think about the acquisition reform, the time is now. So we've got some bold leadership here from the Department. Congress is weighing in as well, which I really appreciate. I think it's in the acquisition system, taking measured risk, not just managing to the contract. What does the war fighter need? And then how does industry and government come together to make decisions that allow that capability to move out with pace and maybe some of the other requirements catch up at a later date. And then it's just purely pure and simply industry investing, industry taking accountability for the outcome and delivering.

Mike Stone:
Secretary Duffey. This is the most important answer. besides the Admiral.

Michael Duffey:
Yes. Best message. The way I think about success is, how hesitant is our adversary and how confident is Admiral Caudle? And ensuring that we're doing everything we can through that framework of decision.

Daryl Caudle:
The worst thing we can do is make reindustrialization be an economic program. This is not about an economic drill. This is a war fighting imperative. So this is about the purpose of our effort. So it needs to be palpable and it needs to have a sense so that we don't have this massive say-do mismatch that I sense exist every day. Where we talk out of one side of our mouth, but their actions don't back up what we're talking about to get after it holistically.

There are pockets of places where it's healthy and pockets where it's not. This needs to be a holistic team effort. So I think the industrial base has got to be modernized, it's got to be resilient, and it's got to be built in a way that it can scale. And I think if we can achieve those things and not make it solely about the economics, but about the war fighting imperative, then we'll be in a good place.

Mike Stone:
Thank you very much. Enjoy the rest of your day.

###