General Arnold W. Bunch, Jr. Commanding General, U.S. Air Force Materiel Command

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DWG: Good afternoon, everyone. Welcome to the Defense Writers Group session for Friday, June 4th. We're honored today to have as our guest General Arnold W. Bunch, Jr. who is the Commanding General of U.S. Air Force Materiel Command. And you're a returning guest, General Bunch. Thank you for doing this. It's nice to have you with us.

General Bunch: David, it's an honor and a privilege to be here on behalf and representing the 89,000 plus uniform and nonuniform airmen of Air Force Materiel Command.

DWG: Super. You know the format. This is a journalist forum so we do Q&A. I'm going to start by asking you sort of a broader question because I suspect others may ask more specific things.

Your portfolio spans everything from a lot of legacy systems that were probably in some cases created before I was, to others that are going to be needed in the development of air and space technology for the 2030s and beyond. Some of those older systems are still pretty useful though, aren't they? So how do you think about this? How do you get the balance right for your command as you have to basically have the reliable, good old systems that you know you can count on and still have adequate spending on what the next wars are going to be like.

General Bunch: That's a great question. It's one that we're constantly playing the balance of. We look at the capabilities of the platforms and we look at how supportable, sustainable and maintainable they are. And can we keep the parts available? Can we continue, are they structurally sound to put airmen in? How are those things going to work? And we also look at what is the National Security Strategy? If you look at our budget this year, we are making a shift in that we are investing more in newer and more advanced because the National Security Strategy has asked us to focus on what we're going to need to do for that next gen fight and make those investments in those areas so we're ready for that higher-end fight.

We look at those and which platforms we're going to maintain and which platforms, what's the structural life? Can I do the part supportability? Are we going to be able to make that thing? What do we find when we put them into depot?

One of the platforms that up until a few years ago we counted on for extending out was the F-15C's and D's. And their wings kind of voted. The wings weren't going to be able to sustain them for the amount of time that we needed and it was going to be cost prohibitive to carry those through, do the service life extension program, replace the wings and everything else, and we made the decision that it was time to move on and we made the investment now in the F-15EX.

So it's a constant look at what can we support and sustain and continue to add new capabilities to so that it's relevant in the fight, and what technologies do we really need that we can't get with the legacy and how do make [inaudible]? That's the balancing act that we're trying to make each and every day.

DWG: How much of that balancing act is in your hands?

General Bunch: The interesting part about that question is, David, we don't really do anything just for AFMC. We are truly an enterprise-focused organization. And I'm going to go a little broader than what you said the portfolio was, because not everybody remembers this. It's also installation and mission support for the entire Air Force. And all the power projection platforms.

We talk about platforms and airplanes but we're also doing it on facilities. Do you demolish it or do you build a new, or how do you do that?

So we make the recommendations. We run it through the corporate process. We provide the information that goes to the decisionmakers and we get a vote in that, we make our recommendations on this platform is no longer structurally sound or we can't get these parts or this facility's not good. That's really the role that we play.

DWG: Thank you. Now I'm going to open it to our members and more or less recognize people in the order they signed up. We have to have some system, so that's the one we've got.

John Tirpak, Air Force Magazine. Do you have a question?

DWG: Yes, sir. Thank you very much. Good afternoon, General. Nice to see you again.

I have a question that follows on the conversation we had last year. Munitions for this budget took a deep dive, especially on JDAM. I'm wondering if this indicates that the Air Force is getting out of the JDAM business towards something new that would maybe be more survivable, maybe less joint direct attack?

And also last year you told me that you would like to get out of the sine wave boom and bust of munitions production. Is there any way to ever get there? Or is this just the world we live in where the munitions are the bill payer for everything else?

General Bunch: John, I wouldn't say they're a bill payer. Let me immediately say that. I don't want it to be viewed that way. And you and I have talked about this now for a number of years and as you'll recall, I was one of the ones that was in the fivesided building going around and trying to get our industry partners and we were ramping up the production because where our levels were.

What we've done over the last number of years is we've invested in those and we're not dropping as many now and we've built those stockpiles back up to a level that we can maybe not buy as many as we were.

The other part is, and you touched on it. Let me step back.

We built it up. We're going to continue to invest at a level to make sure they're there and we can buy. We're also still going to be doing foreign military sales of JDAMs, the example that you used, we'll continue to do that. And that will keep the industrial base hot, that will keep the pipeline open. Not generating the number we were before, but right now based on stock levels I don't need to generate that level that we were doing before.

But it also ties into what I talked about a little bit in my opening answer to David there. We were told, invest in the future And you touched on it. Higher end. We've invested more in JASSM-ER. We are investing in other areas. We've got money

going into Arrow. There are things we're doing to get after that high end, that we're taking some of that money out of what we were doing with those platforms we were using in Afghanistan, Iraq and in that region and now we're investing them in the higher end fight. And we're trying to make sure that we keep the industrial base there not at the level we were before, but keep it stable and work with our partners to make sure they're buying as well.

DWG: If I can follow up, since we are, we call it great power competition but essentially we're back in the Cold War. For the next round of munitions should we be thinking about going back to dual sourcing so that there's surge capability if we get into a shooting war with a near peer?

General Bunch: John, that's a great question. What I will tell you is our digital campaign effort that we're doing across the command, the focus that we've been doing now since February of last year. We've had this going with the team out of AFSC working with AQ and teamed with SMC, setting that enterprise in, we're buying things in a digital manner, open architecture, agile secure DevOps, training our people. If we can get to that structure we can then, maybe we will be able to insert or inject technology or a new component if an industrial partner can't do something, and we should be able to surge those with us owning more of the technical buy plan. We're already doing a couple of examples of that with steel manufacturers building cases to where we're doing it in a digital environment so we can tap into multiple vendors to be able to produce.

So that's one of the benefits out of the digital campaign that we're trying to run, is to try to get us to the point that as technology changes with an open architecture, or if someone can't provide something, then we can inject something else in.

DWG: Thank you.

DWG: Pat Host of Janes, I see you're on. Do you have a question?

DWG: I do. General Bunch, I have a question for you.

Lockheed Martin told reporters this week that they and DoD are moving a 24x7 F-35 customer support center from Fort Worth to Wright-Pat and to have IOC later this year. It will take calls

from anywhere in the world to link up pilots and maintainers with Lockheed Martin engineers to help fix F-35 issues. Lockheed Martin said this was a Pentagon decision to move this center from Fort Worth to Wright-Pat and that DoD is paying for it.

What I would like to know is in this ultra networked world where basically you can work from anywhere on earth and talk and communicate with people on the other side of the planet instantaneously, how will that help F-35 operations and sustainment to move this facility from Fort Worth to Wright-Pat?

General Bunch: Our hybrid PSI is located here at Wright-Pat. That's where that's located and we're building that force up. We're going to have more people there. That's our Product Support Integrator or system integrator, and they're going to be located here. I think what this will do is move that closer together so that they're partnering more.

And you're right, we can do, we are all linked together with the network but there is a value in being right there together that I think we're trying to capitalize on.

DWG: Sure. So who's going to be there together that's going to make this thing good?

General Bunch: I have not looked at exactly the manning right now, Pat. That's one we'll have to go take a look at and we can get back to you on. But the goal is to make sure as our numbers, and we continue to build more F-35s that we can be as responsive as we need to be to make sure we're getting the mission done all around the world wherever it is, and we can project air power 24x7.

DWG: Thank you, sir.

DWG: Mandy Mayfield, National Defense Magazine.

DWG: I don't have a question. Thank you.

DWG: Okay, Dmitry Kirsanov of TASS?

DWG: Thank you so very much for doing this again, General. We very much appreciate the time.

I just wanted to ask if you can give us an update of any kind on

the hypersonics. Plans for development and things of that nature Thank you, sir.

General Bunch: The one area that I will talk about there, Arrow, is the one program that we have continued and we continue to invest in. We are still looking to get in '22 or early '23 to have our first operational capability. That's the program that we've put additional dollars into procurement and additional dollars into the research, development, test and evaluation funding for. We're really driving to make sure we've got that first operational capability as quickly as we can and the program is continuing to progress.

DWG: Thank you.

DWG: Courtney Albon of Inside Defense. Do you have a question?

DWG: Yes, General Bunch. Thanks for taking the time today.

I wanted to ask about F-35 sustainment. A more specific question on that, Lockheed has said it proposed some options for reducing manpower on F-35 sustainment, and I'm curious if you're familiar with that proposal and what kind of, I guess what the Air Force's take is on the possibility of reducing manpower to save on long term sustainment costs. Have you run those numbers? What are the variables you'd be looking at there?

General Bunch: Courtney, we are in constant dialogue with Lockheed Martin and the JPO on all options to try to reduce our sustainment costs. Manpower is a part of that and we continue to look at that.

We are in dialogue. We want to make sure the system is supportable and that we can sustain it with the manpower there. We're not ready to make a change right now. We understand the manpower we've got. We would like to take those numbers down. But there are things we're working with both the JPO and Lockheed Martin that would make us feel more comfortable doing that. And so I am aware of their proposals. I am aware of what they've talked about. I actually read the article yesterday, and we're going to continue to partner with them.

I won't go into any specifics as to what we're doing, but we are working with them to continue to get at that to try to drive down the sustainment costs. And it's really focused on the Chief's

three things that we're talking about - capability, availability, and affordability. All of those, keeping the aircraft available, keeping them affordable, that ties a lot into the sustainment that we've got. Then of course we need them to be capable for the 5th gen fight that we're looking for.

DWG: Why not go into more detail? Is it negotiation right now?

General Bunch: It's not finalized, Courtney, so I don't know what additional detail I'd really be able to give you. I think what we want to see is, and we're working with Lockheed Martin, we want to see the system progress so that we feel comfortable taking more people off the platform. And I think it's going to be a little bit of time working our way through that, Courtney.

DWG: Thank you.

DWG: Lee Hudson of Aviation Week. I see you're on, do you have a question?

DWG: No, thank you.

DWG: Marcus Weisgerber of Defense One, do you have a question?

DWG: I do, thank you. Hi, General Bunch.

I wanted to ask you about my favorite program, VC-25B. Boeing's in a legal dispute with one of its suppliers and they're reevaluating their schedule and I understand that they have presented a schedule to the Air Force for deliveries and what not. Can you share with us any details of that? Have you finalized it yet?

General Bunch: I would have to go to the PEO for that program to get you that, Marcus. I'm not trying to dodge. I don't know the latest status of where they're at in reviewing that schedule.

I do know that one of the companies that was doing the work with Boeing is not going to be doing that work and they're looking at what they can do to pull that schedule left and [inaudible] from where it could go, and they're continuing to look at options to get it done as quickly as they can.

So I can't give you much more detail than that, unfortunately.

DWG: That's all right. I'll give you a follow-up on something broader.

John just asked you about JDAM. When you're thinking about the digital campaign and buying more IP, I guess, down the road, we hear the Army talking about recompeting JLTV because they own the IP and basically having somebody other than Oshkosh build that vehicle.

Are you thinking that way about stuff like future aircraft programs? Since you own the IP, having a situation where, as John put it for JDAMs, having dual sources or if something happens down the road, if we get involved in a war, that you could have multiple companies building aircraft?

General Bunch: We see that as an opportunity with the digital. Some of the things we're experimenting with right now is keeping a core mission system set of software that would be common to whatever we wanted to buy so you could then shape around it what you needed. That's something we're investigating right now.

But the digital campaign is really about having the technical wherewithal, owning and - owing is a strong word, but I want to get the technical part to the point that if we need to make a change and need to go another way to get a component in or something else, that we can do that.

So that is part of what we're trying to do is keep competition and get to the point that we can move at the speed of relevance. In the command right now and across the command we're very focused on speed with discipline. That is going at the speed we need but doing it in a disciplined manner so that we've got the right data rights and we've got the right models and we understand what we're putting on contracts and we've got the right trained airmen to be able to go execute in this new way that we want to go procure systems. That's going to be one we focus on with, I'm not the acquisition executive. Right now that's Ms. Costello. She's our Service Acquisition Executive. But in our dialogues I think Darlene and the rest of us are committed to that's how we need to be doing all of our acquisitions and it almost needs to be the exception if we're not going to go down that path.

DWG: Thank you.

DWG: Ellen Mitchell of The Hill, do you have a question?

DWG: I don't have a question at this time, thanks.

DWG: Garrett Reim of Flight Global?

DWG: My question is regarding Golden Horde, the collaborative weapons. In some of the press releases that [AFRON] sent out, it sort of indicated they see this as almost like the next JDAM or next laser-guided weapon.

Should we see this as the future of munitions? What is the next weapon likely to have this collaborative capability incorporated?

General Bunch: Right now we haven't finalized what will be the next collective. What we've demonstrated is the ability to do that collaborative nature and networking. Right now we're not foreseeing that immediately moving into a program of record. What we are looking at is taking the modeling and the capabilities that we've been able to demonstrate as we've done this and use that within our Program Executive Officer for Weapons portfolio, and the Air Force Research Laboratories Munitions Directorate, to be able to bring in new ideas or new capabilities and model those and do some experimentation in a virtual environment so that we can determine what the gain out of that system may be. Then we will look for future ways that we can morph that into a program of record at a later time. Right now it is not moving into a program of record at the moment.

DWG: Thank you.

DWG: Scott Maucione of Federal News, do you have a question?

DWG: Thank you, General Bunch for doing this.

Today the Air Force announced one of its vanguard programs which would be Rocket Cargo. It sounds like something that Materiel Command would definitely have a lot to do with, considering you need to move a lot of things around.

What sort of work will you be doing to kind of help out with that and inform the decisions that they make and the science behind things, all that kind of stuff?

General Bunch: It is an exciting time as we look at Rocket Cargo as our next vanguard. That was announced today. It will be managed out of our Transformational Capabilities Office in AFRL in close partnership with, and we'll work closely with Space and Missile Systems Center as we do the S&T development.

The role that we will play, we will provide some of the use cases for what it would take to either move humanitarian or a large tonnage of cargo into the field and support someone. One of the things we are not going to do, we are not going to get into the rocket launch business. That's not what we want to get into. The commercial industry is driving that. We're not going to get in the way of that in any way, shape or form.

What we really want to do is see where the S&T is for packaging it, utilizing that capability to get that cargo or equipment to the front edge or to the battle, up front lines of the battlefield, or to resupply or wherever we need to go in a very quick manner and it being cost effective to do. So we'll help come up with the use cases. We'll help with some of that planning. And then we will help as we assess what the business case analysis is, for whether there's a [there] there as we look at this.

The main focus right now is going to be on the S&T associated with it to make it reliable and executable.

DWG: Thank you very much.

DWG: Mitch Tanaka of Kyoto News, Japan. Are you interested in asking a question right now?

DWG: Yes, thank you very much for taking my question. My question is on hypersonics and with regard to competition with China.

In terms of development of hypersonic weapons, how do you assess the competition with China? Who is taking the lead? And what is the U.S. Air Force doing to maintain the lead or close the gap as of now? Thank you.

General Bunch: I won't go who's ahead or who's behind. I won't exactly do that. What I will say is we know that a couple of countries in particular are investing pretty heavily in hypersonics and we know that to deter and compete in that

technology area we need to make that investment. That's why you've seen us make the push for originally Hacksaw and Arrow. We knew when we started it that as we progressed if both the programs were going very well we would probably down-select Arrow. We also have efforts going on in DARPA that are looking at a couple of ideas. And we are working closely and watching closely what the Army and the Navy are doing as well as working with OSD R&E. Because we're all making sure that our investments are sync'd and we're working on the materials, we're working on the boosters, we're working on the industrial base, and we're making sure that we have that capability to produce those so that we have a viable capability that's credible as we go forward. We're looking at our test facilities and our test capabilities to make sure that we can meet that as well.

So we know that there are countries that are investing in that area and we are making investments and we're not only investing in some of those assets, we're investing in test capability. And the other part we're really doing is increasing our intellectual capital in that area as we've worked across the research laboratory, we work within our program offices, and we work within our test enterprise.

DWG: Thank you very much.

DWG: Valerie Insinna of Defense News.

DWG: Thank you. I actually wanted to follow up on Garrett's question on Golden Horde.

I was wondering, General Bunch, if you could kind of talk a little bit more about the decision to not move forward with a program of record with Golden Horde. Were there concerns about maybe the technology being too immature or the ConOps being too immature? And then when you look forward to the virtual experimentation that you guys are planning on doing, what might be happening there? And is that going to replace some of the experimentation that AFRL was hoping to do originally with a collaborative version of [Malls]?

General Bunch: I can't answer exactly what it is with [Malls]. I won't be able to go there, Valerie, I'm sorry.

What we have created is a digital representation and a capability to do that not just now but for in the future. So that we can

bring ideas in and see what's there.

So this is not intended to be able to replace at least in my mind, in my opinion, not to replace what we were trying to do with specific experiments. We're still going to do some of those live and demonstrate. But what we also want to have the capability to do is try out new ideas and things before I have to do them in an open air environment and create something that I can replicate multiple times. Because when you start trying to associate targets weapons, aircraft, range, everything else, that becomes costly and it can become labor intensive.

If I could create a virtual environment where I can try out new ideas and hone those, and then try to do the open air things it makes it more efficient and more effective in the longer term. That's really kind of where we're going after that.

Just because you don't take what we've done in Golden Horde, we still learned all those things and we realized when we started the vanguard program, some of them may not transition into programs of record. The benefit that we got out of this one and the other vanguards that we're learning as we do this because we hadn't historically done it this way. We did have a MAJCOM, a user there looking at it with us. We did have the program executive officer there with AFRL. So it was that teaming that led us to look at what was there, and there may be certain parts of what we found in Golden Horde that we could take out and put in another weapon or put in another system, but in and of itself what we've done thus far, we're not going to make a program of record. Hopefully that was reasonably clear.

DWG: Theresa Hitchens, Breaking Defense. Do you have any questions you'd like to ask right now?

DWG: I do. Hi, General Bunch. Thank you for doing this today.

I wanted to go back to the digitization campaign and just ask you where are you with that? It's a pretty broad effort. I think it was last September you were looking for industry competitors. Can you just bring us up to date on that? And what your budget might be for that in FY22?

General Bunch: That's a great question. Here's kind of where we're at. We started in February of last year so we've been running at this now for a while. We've done it across every one

of our centers, so it's not one that we said this is just a life cycle management center thing. When we stood the team up and I energized this from the beginning, we brought in the Test Center, the Sustainment Center, the Research Lab, the Nuclear Weapon Center as well as the Life Cycle Management Center and we even brought in the Air Force Installation and Mission Support Center so that we could hopefully get to a digital plan of what's going on on our installations and we would have a better idea of tracking that. Right now where we're at, we've got six major lines of effort, and I won't go into each line of effort but they span everywhere from what kind of IT backbone do I need, what kind of training do I need all of our airmen to have, what do I need to put on contract so it spans that whole thing. So we're working that across the acquisition enterprise and again, in very close partnership with Ms. Costello's team up in AQ, and we put a digital guidebook out that we're sharing with everyone so they can read and learn about what we're trying to do. We have talked to industry on multiple occasions. We're now working into the contract language we want to put in place. We have been able to take a little bit of money out of my budget and put it over there but it's not very much. It is something we're going to be focused on for the future but we have done also is we've added 12 additional people, which if I'm adding people to it that tells you I'm committed to it. We've added 12 additional people in it to lead that effort and make sure we're working it across the enterprise and that we're staying sync'd up.

DWG: Can you tell me how much is in the budget and when you might envision actually putting some people on contract to do things?

General Bunch: I believe it will be a big [toss] that we get into the '23 POM as to where we go. Right now what we're really doing, and let me be really clear here, because I'm not giving you a budget number does not mean we are not doing anything. What we are doing is programs that are executing digital efforts. We are capitalizing on that so that we can share, if I'm doing it in a program, so what is happening in GBSD which is one of our bell cows for how this is going to work, what you're doing with GBSD, we're taking those tools and we're now sharing those across enterprise so that you can get the licenses and everything at a lower cost and you can go in and utilize those tools.

So if a program is doing it we're capitalizing on that work that's being done, and as new programs come in we are shaping

where they want to go with their digital plans so that we can capitalize on the new tools that they're bringing in.

Hanscom is also working under General Schmidt is working on digital engineering and a digital campaign to [beef] this so that we can share. And then the other part we're doing is we're assessing our IP backbone and making investments in the IP backbone so that we can get the data throughput that we need to really be able to go and execute.

So we do have a lot of efforts. It's not huge amounts of money right now but it is money we're putting in and it's here and there and everywhere we're pulling the money from and capitalizing as best we can.

DWG: So you're looking at FY23 for the --

General Bunch: For the bigger vision of where we're trying to go. But like I said, if you've got a new contract coming up and you're doing digital, we're going to capitalize on that with what we're looking at for the command.

DWG: We're in the happy position that there is going to be a second round. First of all, has any journalist not had a chance to ask a question and would like to? Okay, then I'm going to ask one.

I don't know my stuff as well as most of the people on this all, General, but I'm just curious, with Space Command now set up, I mean for example, have any of the personnel that used to be in Air Force Materiel Command moved to Space Command? Or do you serve them? How is that working for you?

General Bunch: That's a great question and one that we're working closely. So I'll give you two examples where we're intimately involved in this and actively engaged.

One of those is the philosophy that we went forward with and the plan forwards as a Department of the Air Force was one AFRL supporting two services. So right now what General Pringle is doing, and she is doing a phenomenal job executing our S&P 2030 plan and that strategy. She is providing support to both the U.S. Space Force and the U.S. Air Force. There are parts of the Air Force Research Laboratory that now have Space Force Guardians - they are Guardians. And we've seen some of those folks

transition. A lot of that is within Space Vehicles Directorate. There are certain parts of our Sensors Directorate and others that are doing that.

The one thing that we have stressed from the very beginning, and I say we. I would say that I have banged on my highchair to get people to pay attention. As we do this we cannot create a barrier from technology flowing to whichever service needs it. Technology doesn't know where it's going to be used until you tell it. It doesn't know it's used until you tell it what it is. So there are a lot of things that are not directly tied to the Space Force that we can use to support the Space Force. So a lot of the information directorate efforts that roam directly can support what Space Force is trying to do from a command and control and from a data integrity and a cybersecurity, they can directly support and we want to make sure we don't have any barriers there.

Same with anything they're working in the [Inaudible] Directorate flowing to aircraft. General Pringle's done a really good job with that so I'm really happy. That's one area.

The other area that we're going to continue to support is the Air Force Installation and Mission Support Center is still going to be working the budget and covering and funding and working with the Guardians, the Space Force, the Guardians and their bases to make sure that they're able to support those bases so that we're taking care of our Guardians and their families and making sure of them.

Those are just two quick examples of things.

One other one, and I said I was going to give two. I told you wrong, I'm going to give you a third.

The other one is we actually have graduated one class of Space Test Guardians. We actually established out of the United States Air Force Test Pilot School under General McDonough's lead and Colonel Pavone's lead as the TPS commandant, a class we've ran through and graduated, the first set of Guardians to go through that class and we now have done another selection board and we're getting ready to put the next group in. So we're supporting in a variety of ways to make sure they keep their mission moving forward.

DWG: Pat Host, I know you have another question.

DWG: Sir, ABMS. Last year you received half of the amount of money you requested for the program and for FY22 you requested half of the money you expected to request for this program. What is going on with ABMS?

General Bunch: First off I'll talk about what we did. We did get some money taken away and we weren't able to do everything exactly that we expected to do with ABMS last year. We had to remove one of the demos out, but we have now took a relook at what we were doing.

What we have focused on right now, we're focused in increment one and we're going to deliberately pick increments to put capability out into the field. So the first increment that we are doing, and it's now - we changed some of the efforts. Like right now the Rapid Capabilities Office is serving as the ABMS integrating program executive officer so they will look at those capabilities, they will look at what we want to put out in the field and then we'll work with specific platforms and PEOs to get that integrated in.

The first one that we're doing is putting something in the KC-46 so that we can link and communicate and provide additional situational awareness from the KC-46 and others, but link in F-22 and F-35 data sharing and create that bridge so that we can share and communicate better.

What we're going to look at is putting out more of these increments at a regular battle rhythm so that we are more integrated together and we share that information in a more timely manner, and we're pushing more things out to the field quicker.

DWG: If you're requesting half as much money for this year as you expected to request in a previous budget year, does that mean that you are struggling with this program to execute it to your goal?

General Bunch: No.

DWG: Why?

General Bunch: I think what we've done is we've relooked at how

we were putting it out in the field and we restructured our timelines there to make it more effective. It will deliver more capability in a regular [pattern].

DWG: John Tirpak?

DWG: Thank you very much.

General, I'd like to ask you a different facet of the hypersonics question. Could you talk about some of the things that may be in the budget? I wasn't able to get satisfactory answers from the Air Force yet about what's being done to improve or build new wind tunnels to test hypersonics; what's being done with your ranges; and anything else that you can tell us about what you're doing to catch up in the area of testing hypersonics.

General Bunch: John, I don't have an exact dollar figure I'll be able to give you so I'll just establish what you're asking for.

DWG: If you can just go around your command and talk about the tunnels and anything you're doing with NASA, anything you're doing with Edwards in terms of testing.

General Bunch: We are looking at predominantly what we've got under Arnold Engineering Development Complex and we are making some investments in the wind tunnels down there. We're making some investments in our [R-Jet] heaters to create the right environment. So we're making those investments.

I believe you know that in the past, this is not new and it wouldn't be in this budget but I think you know that we've made some arrangements with some universities in the past so that we have some more capabilities in those areas for what they funded on their own but we're going to partner with them on. We're looking at Holloman and our sled track and what have we got to do there to maybe improve the capabilities there and increase our throughput.

We do continue to look at how are we going to instrument the range and use assets. I can't tell you I've got that 100 percent, but I can tell you that we're making some investments in those areas to look at how do I track, how do I target, how do I keep track of this thing and what are we doing in those ranges, whether that be over water or over land.

So we are looking at it, John, and we are making investments to try to increase not only our capability but also our capacity.

DWG: Can you give perhaps a rough order of magnitude about whether it's flat or an increase or a big increase? Not looking for percentages, but --

General Bunch: Nah. I would tell you, I think it's up. I can't tell you it's a huge up, but I will tell you it's up.

DWG: At this stage why don't I just open it up. Does anyone have a question they'd like to ask?

DWG: Courtney Albon with Inside Defense.

I wanted to follow up on the ABMS questions that Pat was asking. You mentioned there was like a restructuring of ABMS timelines. Can you go into any more detail on that? And also as Pat was alluding to with the cost reductions and all of that. It sounds like you're saying this is like a strategy driven decision, but was it also a budget driven cost reduction kind of driven thing?

General Bunch: Courtney, what I will give you is we looked at how we were pushing capability out to the field and we wanted to put more regular instruments of capability delivery, and that was the reason that we restructured it around so that the Rapid Capabilities Office served as that integrating program executive office. That's been in place for a while, and we've been working our way through that and right now they've [inaudible] the first increment and now they're working with the KC-46 program office and our mobility and training PEO to get that to happen.

So I believe we took a relook at how we were doing it. We structured in a manner that we could communicate more clearly and we're outlining what we're doing and we're going to be pushing regular increments out. We're still going to be doing experimentation. That still is a key part of this to look at what the art of the possible is and then out of that experimentation we'll look at those technologies and see if there are things that we want to put into the next increment and put a more regular incremental fielding of capabilities than what we had before.

DWG: It sounds like what you're saying is, and I'm familiar with like the RCO's transition and all of that, but it sounds like

what you're saying is with that restructuring that happened a little bit ago, this year's budget request reflects that kind of refining of --

General Bunch: It's that strategy.

DWG: Other questions?

DWG: One of the phrases that I'm hearing a lot in the building is that in the future with near peer competitors, they're expecting opposed logistics. In other words the big asymmetric advantage that the United States has in being able to place troops and then sustain them will be sort of opposed by near peer competitors. Is that something that your group is looking at? And how do you see research or what needs to be done to change that?

General Bunch: I think what you're really - I want to make sure I use - first of all, can I get your name again, sir? Sorry. I didn't hear it when we started.

DWG: I'm Jim [Guiermo].

General Bunch: I'm sorry, sir, I didn't mean to slow us down there.

I think what you're talking about are contested environments and how we're going to do logistics there and how we're going to operate.

One of the constructs that we have talked about is agile combat employment and we have talked about logistics under attack. Right now we have a core function team that's working within our Futures organization our A5-7 shop. They've got a core function team and they're looking at how do we go execute along these ways? What modernized support equipment do we need? What's our [inaudible] of the future? What's supply chain risk management? How do we do logistics C2? And we're already experimenting with how do we do this in a different way? And it is a change from what we've done. Many of our airmen have not gone and deployed to a new location, stood up, executed ops. And then moved to another place or done that for a period of time. We've been in the desert now for quite an extensive period of time.

We're experimenting with [inaudible], we've done it before, and

the teams are doing great work. USAFE and PACAF are both experimenting in this area. General Guillot in the AFCENT is doing this as well. And we're doing experiments to make sure we know how. That's a key part of this. What we learn, then we will shape, do we need to do more research? How do we need to go about trying to make this happen? But we're moving rapidly in that area.

DWG: Sir, do you see this mostly as changes in policy or do you see this as a need for materiel, or how do you see this moving forward?

General Bunch: I think it may end up being all of those. It may not be that it's a change in material but it may make us relook at what do I send in a deployment package? What kind of support equipment am I going to have? How are we going to get the resources we need there? What's the logistics tail going to look like? Those area areas that we are looking at.

There may be policy changes as to who has the approval to do certain things. How do I delegate that authority down? What are the delegations that I need that commander that may be isolated away, what do I need that airman to have so that he or she can execute that mission based on the broad guidance that they've been given by the JFAC? And so we're looking at all those areas right now and that's part of what we're getting out of our experimentation.

I don't know if it's going to drive us to change what we buy. It may. We need to continue to experiment and look at what those lim facs are so that we're making wise investments for the future.

DWG: Theresa?

DWG: I just wanted to follow up on that. The ACE concept is pretty critical to the joint warfighting concept. I mean it's a key pillar. Are some of the things you're looking at new capabilities that would allow you to do missions with fewer people? Like so you can make the footprint smaller when you're doing logistics? Can you talk about that aspect a little bit?

General Bunch: We're looking at all aspects to make that footprint as small as we can. I want to take as little of a footprint, because depending upon where it is and the calculation

in USAFE is different than the calculation in PACAF. So there are some area dependencies, but what we really want to do is what do we have to have from a spare kit, from an equipment list, from everything all the way down to manpower because you want that footprint as small as you can so that if you're either trucking it in or airlifting it in or railing it in or whatever you're doing, that's going to be a pretty big demand signal and we've got to make sure that we know how we're going to go execute that.

So it's looking across the board at airmen. Can I multi-skill an airman? Can I give him two different jobs? How do I do that? Do I really need 15 of X in the spares kit or can I get by with 5 based on, and this will tie it back into another effort that we've been really focused on, conditions-based maintenance is one of the big things we're pushing right now across our fleet, and it's based on conditions based maintenance analysis. I know that those parts most likely are not going to fail. Maybe I don't take four. Maybe I only take one. Or maybe I do the maintenance before I ever deploy the aircraft so that I'm doing the maintenance when I want to, not when I have to.

So all of these meshed together, these algorithmic things we're trying to do to control the maintenance. How we're tracking our parts. How we're doing our repairs. How we're doing our replacements. What's the footprint? What's the support equipment look like? What are our airmen doing. All of those tie together to get to this [base] concept and that's why we're doing all the hard work in that area.

DWG: Can I just ask how you were cooperating with the Army on this? The Army, if I recall, is supposed to be for the lead for the development of the logistics under attack concept under the joint warfighting concept. Are you working with them?

General Bunch: I am sure the people in the Pentagon are working very closely with them. What I just relayed to you are the exercises that we're running right now and I can't tell you exactly what's there.

DWG: Thanks.

DWG: John?

DWG: General, back on the munitions. Are your R&D people looking at perhaps extending the usability of things like JDAM by

putting some kind of strap-on propulsion system on them?

And we haven't heard much from the Rapid Sustainability Office for a while. I wonder if you could tell us what kind of recent wins they've got or what their big push is these days.

General Bunch: I am not aware, and we look at - I used to be the Director of the Munitions Directorate down at Eglin and I loved that job. You're a colonel in the Air Force, you get paid to blow stuff up every day. How can you get a better job than that? And we had all kinds of mad scientists down there coming up with ideas. So I'm not going to tell you we're not looking at that. I'm not aware that we're looking at that, but they look at everything as an idea of how to get more effective. So we're always looking at what can we do with what we have and what's the new technology I may be able to add on? So we're always looking at those kind of things, John.

On the Rapid Sustainment Office, I am just really proud of the great work the team is doing. We continue to look at conditions based maintenance in a variety of ways. I took a brief just this week and we've got multiple algorithms that are running on C-130s right now and collecting data. We're using those data to help us forecast and make sure we're removing parts when we want to, not when we have to. So that's going on the B-1, it's going on multiple platforms. They're doing a great job there.

We continue to look at pushing out advanced manufacturing and one of the things that I think is a big win is we actually have an engine component that we've done advanced manufacturing on that we actually have flying. It sent through the air worthiness process and we actually have it out flying and doing great things.

So that's a big win, because one of the things we're working our way through, and it's one of the things that with advanced manufacturing you've got to make sure you're doing, I've got to get the air worthiness part right. And that's the area that we can do to great advantage. So I'm really proud of what they're doing there.

We had our Advanced Manufacturing Olympics. That's a little older news. We're still looking at those things and working our way through some of those ideas. And so we continue to dig and look, dig for, investigate, find things that commercial industry

is doing that we can try to bring into what we do. More robotics in our sustainment center for laser [inaudible] paint, for other things like that. Cold spray, a technology to repair components that may no longer be usable that we can do a cold spray which is pretty advanced. I'm not going to try to give you the Arnie Bunch version of how it works, but it is a technology that industry uses that you can use this cold spray technology and you can take components that were no longer viable and may be condemned and you may be able to put them back in the field.

Those are all things they continue to push and challenge, they're challenging our community to move forward with where industry is. So I'm really proud of what the team's doing there.

DWG: General, your indulgence just for a minute here. I'd like to just talk about the Defense Writers Group for one second.

As many of you know, this is my last session as Director of the Project for Media and National Security under which the Defense Writers Group now sits. It's really been a tremendous honor to work with all of you and to get to know some of you. I was a working journalist for 33 years before I became a federal official and two or three other things, other ventures I've had.

I'm now retiring from full time work, although it's a typical Washington retirement. I'm actually going to do a bunch of part time things, I'll be quite busy.

But I just wanted you to know, all of you, how much I have enjoyed working with you, how much I honor what you do, how important journalism is for our country, how important the relationship is between the military and the media. This Defense Writers Group was founded right after the end of the Vietnam War. These two important American Institutions hadn't had a terribly good war together and it was very important to be talking and building relationships so that they could together help our country and I think they do now and I think the Defense Writers Group helps that.

So it's been really an honor. And with me, just in the back of the room here, is my honored successor Thom Shanker who until last week was the Deputy Washington Editor of the New York Times. But Thom, welcome to the Defense Writers Group; welcome to the Project for Media and National Security at George Washington University. Do you want to say a couple of words?

Mr. Shanker: Just quickly. This is time for David's farewell, but having been a participant in these breakfasts for 13 years, back when I was a Pentagon reporter and then editing many stories that came out of them, I feel this project is an absolute gem. It's my goal to fill David's giant shoes that he's leaving me to walk in that path and do some exciting things ahead. I know many of you, I look forward to meeting the rest of you, and we'll make a great go of it. And serious thanks to David for all he's done in the past four years.

DWG: Thank you, Thom. Thanks for indulging us, General.

It's a change of command. So we just had the ceremony, if you will. But thank you very much. I don't know if you have any closing remarks you'd like to make.

General Bunch: I do. Just one thing.

Pat, can you come up? I owe you a follow-up. I'm going to do a little digging on the first question you asked me to make sure that I gave you a good answer. You talked about the unit moving here. Let me do a little digging. Wendy will reach back out to you on my behalf. So I need to follow up on that one to make sure I got the straight truth there.

DWG: Thank you.

General Bunch: And David, for everybody out there, thanks for what you do. We need a good relationship, we need to have these exchanges. So I appreciate your professionalism and appreciate what you do, and thank you for your time.

David, thank you for your service in this role. We wish you nothing but the best in your part time. We'll see how well you succeed at retirement or if you're actually working harder than you were when you were doing this all the time.

Thom, welcome aboard. I look forward to crossing paths with you.

With that, everybody have a great day. Thank you.

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