

Stenographic Transcript
Before the

Subcommittee on Airland

COMMITTEE ON
ARMED SERVICES

UNITED STATES SENATE

HEARING TO RECEIVE TESTIMONY ON
MODERNIZATION EFFORTS OF THE DEPARTMENT OF
THE AIR FORCE IN REVIEW OF THE DEFENCE
AUTHORIZATION REQUEST FOR FISCAL YEAR 2022
AND THE FUTURE YEARS DEFENSE PROGRAM

Tuesday, June 22, 2021

Washington, D.C.

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7
8 U.S. Senate

9 Subcommittee on Airland

10 Committee on Armed Services

11 Washington, D.C.

12
13 The subcommittee met, pursuant to notice, at 2:47 p.m.
14 in Room SR-232A, Russell Senate Office Building, Hon. Tammy
15 Duckworth, chairwoman of the subcommittee, presiding.

16 Subcommittee members present: Senators Duckworth
17 [presiding], Peters, Manchin, Rosen, Kelly, Cotton,
18 Sullivan, Scott, and Hawley.

1 OPENING STATEMENT OF HON. TAMMY DUCKWORTH, U.S.
2 SENATOR FROM ILLINOIS

3 Senator Duckworth: I would like to call the hearing to
4 order. The ranking member is 2 minutes out, so we will get
5 started.

6 I am especially pleased that everybody is here today.
7 I want to extend a warm welcome and thank each of our
8 witnesses for appearing before this subcommittee today. I
9 look forward to hearing your testimony.

10 Last week, the subcommittee heard from Army witnesses
11 about the challenges in the Army's modernization portfolio,
12 and I look forward to hearing from our Air Force witnesses
13 about the challenges and opportunities they face in
14 modernizing the Air Force.

15 I am especially interested in hearing from the
16 witnesses about how the Air Force plans to manage its
17 multiple modernization programs in ways that deliver the
18 capabilities our warfighters need in a timely manner to
19 defeat our most capable adversaries, while protecting our
20 taxpayers' dollars and avoiding too much risk to support
21 combatant commander requirements.

22 This discussion of modernization programs surely should
23 include the F-35 fighter, the B-21 bomber, the KC-46 tanker,
24 and Advanced Battle Management System, or ABMS, which seeks
25 to replace the JSTARS' capabilities, among others.

1 In an effort to be good stewards of taxpayer dollars,
2 the Air Force has been particularly aggressive in
3 implementing accelerating acquisition authorities, including
4 from major defense acquisition programs.

5 Congress has given DOD these new authorities and it is
6 Congress' job to oversee the Department and ensure that the
7 Department uses its authorities to pursue these
8 modernization programs in a more efficient and effective
9 manner.

10 Our witnesses this afternoon face huge challenges as
11 they strive to balance the need to support ongoing
12 operations and sustain readiness with the need to modernize
13 and keep the technological edge that are so critical to
14 successful military operations. Specifically, our Air Force
15 will bear a large share of implementing the National Defense
16 Strategy that is derived from Secretary Austin's review.

17 There is no ignoring the fact that inter-state
18 strategic competition with increasingly capable adversaries
19 is a primary U.S. national security concern.

20 There are a number of other issues that we need to hear
21 about from the Air Force, but in the interests of time, I
22 will stop here and wait for our discussion.

23 Again, I want to thank our witnesses for their service
24 and for appearing before the subcommittee this afternoon,
25 and I will now turn it over to our ranking member, Senator

1 Cotton.

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1 STATEMENT OF HON. TOM COTTON, U.S. SENATOR FROM
2 ARKANSAS.

3 Senator Cotton: Thank you, Senator Duckworth.

4 Gentlemen, thank you for your appearance this morning.
5 Thank you, as well, for your decades of distinguished
6 service.

7 The current National Defense Strategy directs our
8 nation's military to be prepared, to deter, and if
9 necessary, defeat our peers, like Russia and China. In
10 order for the Department of the Air Force to meet that
11 requirement, it must be properly manned, trained, and
12 equipped to win in both, air and space. Given the
13 President's budget, however, I am fearful that is not an
14 achievable goal.

15 At the end of the Obama administration, the Air Force
16 was at the lowest level of readiness in history; fewer than
17 10 percent of combat squadrons were ready to deploy and even
18 fewer were prepared for a peer fight. We have substantially
19 improved readiness in the last 4 years, but we have a long
20 way to go on modernization and this budget is nowhere close
21 to adequate.

22 Air Force leaders have stated the Air Force is too
23 small and too old to do what the nation asks; in fact, 44
24 percent of our aircraft fleet is beyond its service life.
25 Understanding that we can't continue to fly these aging

1 fleets forever, we need to invest and increase procurement
2 to give you the resources you need to divest older systems.

3 All the independent studies show that you need to grow
4 and modernize, but in this budget, you are forced to get
5 smaller and I am concerned that your current budget is
6 inadequate to achieve a moderate risk force, which is
7 required by law.

8 China and Russia, combined, are already spending more
9 to modernize their force than we are, yet this budget
10 reduces Air Force procurement by almost 15 percent and
11 flight hours have been reduced, as well. We understand all
12 this is caused by a budget that falls well-short of the 3 to
13 5 percent real growth recommended by the National Defense
14 Strategy Commission report; in fact, it does not even keep
15 up with rapidly rising inflation.

16 The men and women who volunteer to serve this great
17 nation deserve to be given the tools and the resources
18 necessary to win. So, I look forward to hearing from the
19 witnesses about the impact of this budget on the readiness
20 and the modernization of the Air Force and the risks that
21 the nation accepts if we don't change it. Thank you.

22 Senator Duckworth: I now call on the witnesses to
23 begin your testimony. Do you have an order that you are
24 choosing to go with, General Nahom?

25 General Nahom: Yes, ma'am, I will start.

1 Senator Duckworth: Okay.

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1 STATEMENT OF LIEUTENANT GENERAL DAVID S. NAHOM, USAF,
2 DEPUTY CHIEF OF STAFF OF THE AIR FORCE FOR PLANS AND
3 PROGRAMS

4 General Nahom: Chairwoman Duckworth, Ranking Member
5 Cotton, distinguished members of the subcommittee, thank you
6 for having us here today to provide testimony on the
7 Department of the Air Force's 2022 budget requests.
8 Additionally, thank you for your continued leadership and
9 dedication to the United States' military and the Department
10 of Air Force's 689,000 total force airmen serving around the
11 world today.

12 As you know, our nation faces a complex set of current
13 and future security challenges that require we think and act
14 differently and with urgency. Our Chief of Staff of the Air
15 Force, General C.Q. Brown, has articulated what is at stake.
16 Unless we make significant changes to the Air Force's
17 program force, we will not meet the pacing threat of China
18 in 2030, and unless something changes, we will not be able
19 to accomplish the Air Force's core missions in the future
20 operating environment.

21 The American homeland is no longer a sanctuary. Our
22 citizens face threats from a variety of actors in both,
23 physical and digital arenas, and our competitors continue
24 aggressive efforts to negate our longstanding warfighting
25 advantages. One of the most remarkable differences between

1 us and China, for example, is a sense of urgency to change
2 and modernize.

3 We can state definitively that China's actions show a
4 sense of urgency. They see a future that is very different
5 from the one that we would want to see and they are moving
6 with a purpose to realize that future. Their efforts
7 include a massive buildup of military power and a clear
8 intent to use that military to create leverage on us and our
9 allies and partners.

10 As we continue to work with each of you, it is becoming
11 apparent that our collective thinking is beginning to shift.
12 We are, together, waking up to this challenge and 2022
13 offers us another opportunity to change accordingly so that
14 our actions match our growing sense of urgency.

15 Together, under this committee's oversight and
16 leadership, along with our industry partners and innovative
17 airmen, we remain the preeminent power projection force in
18 the world today. I would like to briefly outline some
19 elements of that capability and how we intend to maintain
20 the preeminent power of our nation's future.

21 The Air Force provides sole, long-range bomber
22 capability for joint and allied forces and our fleet is in
23 any demand across the globe. Combatant commands have
24 discovered the flexibility and messaging power of the bomber
25 task force. Our 2022 budget continues to fund this flexible

1 bomber capability, while setting up a transition from three
2 bomber fleets to two, the B-21 and a rebuilt and refurbished
3 B-52.

4 A key element of this modernization is the development
5 and fielding of advanced munitions, including hypersonic
6 munitions, such as the Advanced Rapid Response Weapon, or
7 ARRW, and the next generation of cruise missiles.

8 Extensive war gaming analysis make it clear that we
9 must also reassess our future fighter force mix and adjust
10 investment priorities to provide the capability, capacity,
11 and affordability required to meet a peer threat.

12 Modernization programs cannot transform our fourth-
13 generation fighters into fifth-generation or our fifth-
14 generation fighters into the Next Generation Air Dominance,
15 or NGAD.

16 The Air Force fighter fleet should match the capability
17 and capacity of both, platforms and weapons, to mission
18 requirements. In order to achieve this, the Air Force must
19 have the flexibility to rightsize our current aircraft
20 inventories, to expedite the transition away from less-
21 capable, aging aircraft and emphasize in investment in
22 future capabilities.

23 As we discuss power projection, we must remember the
24 Air Force provides refueling capacity that makes this
25 projection possible for both, the Joint Force and our

1 allies. As we transition to a two-tanker fleet of
2 modernized KC-135s and new KC-46s, we will retire the KC-10,
3 freeing up the airmen we need to build the KC-46 into the
4 capability the taxpayer has paid for.

5 While we work to rectify some discrepancies, we stand
6 behind the KC-46 and believe it will be a great refueling
7 capability for decades to come. Even today, it has taken on
8 many of the day-to-day refueling requirements and that said,
9 our plan is to make full use of the KC-46 in the near term,
10 while fixing discrepancies as soon as possible.

11 One area where our investments have paid tremendous
12 dividends is in airlift. Our airlift fleet is the envy of
13 the air forces around the world and this year's budget
14 continues to invest in C-5s, C-17, and C-130 fleets.

15 We will be paying particular attention to the tactical
16 airlift fleet in the coming years as we balance risk across
17 all of our Air Force portfolios. The Air Force goal is to
18 ultimately reduce the C-130 fleet to 255 aircraft, but that
19 is only contingent upon our ability to find mutually
20 agreeable replacement missions for any C-130 unit that would
21 re-mission.

22 To meet the challenge of a highly contested
23 environment, we must also envision a future ISR portfolio
24 that consists of multi-domain, multi-intelligence,
25 collaborative-sensing technology. It will be resilient and

1 persistent to support both, kinetic and non-kinetic
2 capabilities, alike.

3 Global integrated ISR must transition to connected and
4 survival platforms. This will be required to accelerating
5 investment and accepting short-term risk by transforming
6 away from less-capable ISR assets. Our goal is a ready,
7 next-generation ISR enterprise that possesses decisive
8 advantage to the warfighter, while remaining competent
9 across the entire spectrum of conflict.

10 In closing, I want to personally thank the members of
11 this committee and the broader Senate Armed Services
12 Committee, past and present. When I entered the Air Force,
13 your predecessors and some of you had worked to develop a
14 force that gave my generation what we needed to defend our
15 country and interests around the world.

16 Today, we must work together to modernize to the future
17 so the next generation can say the same. We have done this
18 before and I am confident, together, we can do this again.

19 I am honored to serve on the same team with General
20 Richardson and General Guastella. They work tirelessly to
21 think differently about how we acquire and operate the force
22 of our future airmen.

23 Again, thank you for having us, and we look forward to
24 your questions.

25 [The statement of General Nahom follows:]

1 Senator Duckworth: Thank you. Who is next?

2 General Nahom: And, ma'am, that was a combined --

3 Senator Duckworth: That was combined for all three of
4 you. Okay. Sounds good.

5 So, then, we will begin with questions. My question is
6 actually for all three witnesses and please feel free to
7 answer in the order that you see fit.

8 A large area of contention in the Air Force budget
9 request, again, this year, is the number of aircraft the Air
10 Force intends to retire earlier than previously planned, and
11 you addressed this already in your remarks. Based on the
12 testimony we have gotten at the full committee and other
13 subcommittees, it would appear that the Air Force believes
14 they have alleviated concerns about the number of air-
15 refueling tankers raised last year by TRANSCOM commander,
16 General Steve Lyons, and are now taking partial credit for
17 the KC-46 meeting those tanker requirements.

18 That raises a point that I would like to make this
19 afternoon. While there may be some parochial issues tied to
20 retiring aircraft, I do think senators are also genuinely
21 interested in the capabilities associated with aircraft and
22 have concerns about risks from retiring systems too early
23 with no replacement. I understand the issues of maintaining
24 aging aircraft, but if there are no replacements for that
25 capability, then we need to reconsider the retirements.

1 That is certainly my concern about retiring C-130s in
2 the face of likely increases in demand arising from the
3 forthcoming mobility-capability requirement study. So, I
4 would like all three of you to answer this. Why does the
5 Air Force keep asking for these retirements when the
6 rationale has not changed much and has failed to convince
7 Congress before?

8 General Nahom: Ma'am, I can start, and I will talk
9 about this individually, the KC-46, and certainly when we
10 get to capabilities, I will hand it over to General
11 Richardson.

12 We have been working very closely with TRANSCOM and I
13 know we have had very good conversations in the last year
14 and we have come to an agreement to make sure we are
15 correctly managing the day-to-day need for tankers
16 worldwide, while we make sure we are also reallocating the
17 resources to modernize, specifically, for the KC-46.

18 We look at the minimum tanker requirement out there,
19 for 1979. We meet that now; unfortunately, that is with KC-
20 46s that are not completely operationally ready. But we can
21 maintain a fleet to meet the current demand. We are using a
22 mix of, obviously, the legacy tankers, as well as using MPA
23 days to take advantage of our total force airmen in the air
24 refueling missions, day-to-day, both, in the Middle East and
25 around the world.

1 The KC-46 is going to be an incredible asset to our Air
2 Force. We are getting use out of it right now, not just in
3 limited air refueling, but also in airlift and air medical
4 evacuation. The RVS 2.0 fix is coming forward and even
5 before that, we are able to use it in many missions around
6 here, stateside, freeing up KC-135s to go overseas.

7 It is very important, though, as we modernize, we have
8 to retire some things because we have limited resources and
9 one of the hardest resources to manage is people. And the
10 same people right now that are flying KC-10s and operating
11 and maintaining those KC-10s are the same people we need to
12 operate and maintain our KC-46s. So, as we continue to
13 accept 15 KC-46s a year, if we are not retiring on the back
14 end, we end up having a manpower problem with these units
15 and that is certainly a concern.

16 And sticking with the KC-46, I will turn it over to
17 General Richardson about the capabilities to see if there is
18 anything that I am missing.

19 General Richardson: Senator, thank you for the
20 question.

21 You know, in terms of the capabilities, I think your
22 fundamental question is a risk calculation. And General
23 Nahom mentioned limited resources, so what we are trying to
24 do is work within those resources and basically do a risk
25 calculation.

1 In terms of the KC-46, we are pretty comfortable with
2 this Remote Vision System 2.0 redesign that we are doing.
3 We will close out the preliminary design review of the
4 actual new camera system this summer and then we will march
5 towards a retrofit schedule that will start in fiscal year
6 2024; meanwhile, we have accepted, I think we are up to 45
7 of the 94 that are on contract right now.

8 So, that capability is building up. It is getting
9 stronger. Our ability to use it is getting better. Air
10 Mobility Command is working on an interim capability release
11 plan to start using that capability.

12 You know, I kind of look at this in a similar fashion
13 as I do with some of our systems that we really love a lot
14 today. And the two that I am thinking of right now off the
15 top of my head are the C-17 and the JASM missile; both of
16 those got a very, very rough start, but we worked through
17 them and we matured them. We were the only customer for
18 them and so we had to kind of be the folks that matured
19 them.

20 I view KC-46 the very same way. I do think it is going
21 to be an incredible tanker and I think it is already growing
22 towards that route. So, we have a number of deficiency
23 reports that we are burning off. The Remote Vision System
24 is the one that we are most critically worried about, but we
25 are actually getting after it pretty heavily and it is not

1 going to cost the taxpayers any additional money to get it
2 fixed.

3 Senator Duckworth: Thank you.

4 General Guastella, would you like to add anything?

5 General Guastella: Ma'am, thanks for the question.

6 And not too much to add, except that I have actually
7 received gas in an F-16 off the KC-46 and it is the best
8 tanker I have ever tanked off of. It is very smooth behind
9 that thing and it is also a very capable aircraft with
10 excellent director lights. So, it is already delivering for
11 us.

12 And how we are mitigating this, ma'am, is the tanker
13 requirements are global. We are using them right now today
14 to retrograde out of Afghanistan. We are using them in the
15 Pacific. And while those are forward requirements where our
16 KC-135s and KC-10s are being used, there are home-station
17 requirements, such as training and tests that we are
18 actually looking at employing the KC-46 as it currently is,
19 in those roles as we modernize the visual system. So, we
20 are getting the most we can out of it to hopefully free up
21 some of those tails to transition to the new fleets.

22 Senator Duckworth: Thank you.

23 Senator Cotton?

24 Senator Cotton: Gentlemen, last week I asked General
25 Brown about the risks if the Air Force cannot modernize.

1 According to its plans, those risks are stark, in my
2 opinion. You know, I don't see the PLA Air Force having a
3 debate about modernization of its military or adequate top
4 line budget.

5 I agree when the Air Force says modernization is
6 critical to achieving a future force that is resilient
7 enough to win in great power competition.

8 General Nahom, we have certain aircraft that are of
9 limited capability to fight in a highly contested
10 environment against near-peer adversaries, something like,
11 say, the A-10. Could you please describe for us the risks
12 that we will be accepting as a nation if the Air Force is
13 not given the authority it has requested to retire aircraft
14 that might be less capable in that high-end peer conflict.

15 General Nahom: Thank you, Senator, for the question.

16 The A-10 is an incredible aircraft. I do, I always
17 like to take it back to when we started with the F-35s. You
18 know, we bought F-35s and went down this road, intending to
19 replace A-10s and F-16s. There is a certain point where we
20 have to actually start replacing these aircraft. And we
21 know the F-35 has had a bit of a rocky road throughout the
22 last decade, so we know we need to continue to work through
23 that.

24 We are not trying to retire A-10s in the near term.
25 What we are looking to do is reduce the A-10 fleet from 281

1 down to 218 airplanes. That goes from nine operational
2 squadrons down to seven. At seven operational squadrons, we
3 will still have more A-10s than F-22s in service.

4 And why seven was significant, we put a lot of analysis
5 behind that. That allows us to keep one squadron full up in
6 Korea and the other six squadrons, three guard, two active-
7 duty, and one reserve squadron, in a rotation to always
8 offer up the combatant commanders at least one A-10 squadron
9 on the road continuously. We felt that was a good position
10 to be in, so then we could actually take those resources,
11 that frees up nearly a thousand airmen, maintainers and
12 operators, that we can then transition into future
13 platforms, specifically, the F-35.

14 As we look at the F-35, we are having resource issues,
15 mostly with manpower, because we have to start replacing
16 some platforms. Right now, the F-35, the Air Force has
17 approximately 300. That is now the second-biggest fleet of
18 fighters in the Air Force and we are going to have to
19 resourcing it accordingly as we go forward, sir.

20 Senator Cotton: And that is just one example of the
21 trade-offs you have between retiring some number of legacy
22 aircraft as you continue to build up the new fleet of
23 aircraft; is that right?

24 General Nahom: Yes, sir. And that goes across all of
25 our fleets.

1 Senator Cotton: And some of those investments are also
2 happening in classified programs; is that right?

3 General Nahom: Yes, sir, especially in the ISR realm.

4 Senator Cotton: So, retired aircraft are done in ways
5 that attracts Congress' attention and local newspapers'
6 attention. It is not always clear what we are getting from
7 those savings. Some of it is clear, we are getting more F-
8 35 aircraft, but we are also getting a lot of stuff that we
9 can't talk about in this setting that is essential to defeat
10 China; is that right?

11 General Nahom: That is correct, sir.

12 Senator Cotton: That is what I thought.

13 General Guastella, the ability for the Air Force to
14 train to win our nation's wars requires the Congress to
15 provide you the resources, in particular, flight hours
16 needed to prepare for a high-end flight. Given the removal
17 of the overseas contingency operations fund and the
18 reduction of flying hours for this budget request, can you
19 explain the risk to readiness, in general, and,
20 specifically, the impact to our pilots' ability to conduct
21 adequate training and providing the Beyond the Horizon
22 support for counterterrorism in the Middle East.

23 General Guastella: Thank you, Senator.

24 So, without a doubt, pushing the OCO flying hours into
25 the Air Force's base budget has put additional pressure on

1 those valuable dollars in that budget and it has been very
2 difficult to sustain the fight against the counterterrorism
3 fight and the counter VEO fight, as well as move to that
4 modern, high-end training.

5 But I will tell you what, our airmen have done
6 incredibly well in fighting today's fight, but the risk,
7 just like you alluded to, sir, is the longer-term risk and
8 the need for those airmen that are in this day-to-day fight,
9 to be able to train against a peer competitor, have those
10 opportunities to fly advanced scenarios, where they can
11 really hone their skills against a peer, and that is
12 something that is very challenging. We are doing our best
13 to manage this.

14 By the way, our flying hours are also a function of
15 what our aging fleet can support. These very old fleets,
16 28-year average age, cannot generate the volume of flying
17 hours that we would like it to, and so it is key that we
18 retire some of those aged aircraft and allow us to modernize
19 to airplanes that can generate to sortie rates.

20 Senator Cotton: Thank you.

21 The potential decline in flight hours can also put more
22 stress on retention efforts of your pilots, as well; is that
23 right?

24 General Guastella: Yes, sir. Without a doubt, the
25 pilots that came in want to fly and they want to fly in

1 advanced scenarios that really build their skills. And so,
2 I think it will be a win-win.

3 Senator Cotton: I have had extensive discussion with
4 your pilots over the years and almost all of them say that
5 the number one reason that they would want to stay in the
6 Air Force longer is if they could fly more, as opposed to
7 doing administrative duties.

8 Did Lieutenant Guastella join the Air Force because of
9 pay?

10 General Guastella: Sir, I certainly didn't join the
11 Air Force to do the job I am doing now.

12 [Laughter.]

13 General Guastella: But, I will tell you what --

14 Senator Cotton: Did you join because of the pay or did
15 you join because you wanted to fly high-performance aircraft
16 in defense of our nation?

17 General Guastella: Sir, I wanted to fly high-
18 performance aircraft in defense of our nation and I have
19 been honored to be able to do that.

20 Senator Cotton: And I am sure that a bonus to retain
21 all of those captains and majors, Guastella, and Richardson,
22 and Nahom, might be appreciated by them, but there is no way
23 you could possibly pay what they would make in the civilian
24 world, but you can allow them to fly high-performance
25 aircraft in defense of their nation, can't you?

1 General Guastella: Yes, sir.

2 Senator Cotton: I think we should do more of that.

3 Senator Duckworth: I joined the Army to fly low and
4 slow, actually, not high, and fast.

5 [Laughter.]

6 Senator Cotton: And I joined the Army to sleep on
7 those low-and-slow aircraft and jumped out of them.

8 [Laughter.]

9 Senator Duckworth: The Senator from Florida, Mr.
10 Scott?

11 Senator Scott: Thank you, Chair.

12 First off, I want to thank each of you for your
13 service. Do you acknowledge that our threats seem to be
14 increasing year after year now and do you have any feeling
15 that, whether you are thinking about Russia or China, that
16 you think they are going to invest less money in the future
17 than they are investing today?

18 General Nahom: Yes, sir. And I would say, you know,
19 when you look in 2018 when the NDS came out, you really had
20 to see change.

21 I have been asked, did the NDS in 2018 get it right?

22 And I would say, yes, but I would say it is accelerated
23 much more between 2018 and now than I would ever have
24 anticipated. So the acceleration of the threat is very eye-
25 watering right now.

1 Senator Scott: And do you believe in the case of
2 Communist China that as they build up their economy, they
3 are going to continue to invest bigger and bigger dollars?

4 General Nahom: Yes, sir, I believe so.

5 Senator Scott: So, have you participated in any war
6 games in defense of, that would go through and say, are we
7 adequately prepared to be able to defend Taiwan? Are you
8 done any war games in that regard, any of you?

9 General Nahom: Sir, we, in the Air Force, have done
10 several war games, which get at to the hardest problems out
11 there, vis-a-vis, China. To get into the details, I would
12 absolutely love to get into a classified setting so we could
13 talk more specifically about them.

14 But I will say that, as I said in my opening statement,
15 there has to be a change in how we are investing our dollars
16 if we are going to meet that threat in the future, and we
17 are very concerned by that.

18 Senator Scott: Do those war games give you any pause
19 that we have the ability to defend Taiwan today?

20 General Nahom: Sir, I want to be very careful what I
21 say in an unclassified setting, but certainly, the threat
22 does give me pause.

23 Senator Scott: There are public articles that say in
24 our war games, we wouldn't be able to defend Taiwan.

25 Have you seen those?

1 General Nahom: I have definitely seen some public war
2 games and items from think tanks that do question our
3 abilities, yes, sir.

4 Senator Scott: So, do you believe that the budget that
5 has been proposed is going to be adequate to both, defend
6 the Indo-Pacific, and, in particular, Taiwan, and modernize
7 the way you envision we have to do it, or do you just feel
8 like you are stuck and you have to take this because of your
9 position?

10 General Nahom: Sir, I guess it would be hard for me to
11 sit here and say that we couldn't use more resources, but I
12 do also, you know, one of the positions I believe we have to
13 be in is how we spend the resources we have, because I think
14 we have some opportunity to focus the resources that the Air
15 Force has been given, not just the dollars, but the
16 manpower. And the incredible airmen we have, I think there
17 are some things we can do differently as we invest moving
18 forward.

19 Would more resources be helpful?

20 Absolutely. But I also think with how we modernize is
21 a very important conversation that we have to have.

22 Senator Scott: Does it give you pause when you see,
23 like you talked about that, you know, Russia and China are
24 spending so much more money to modernize than we are, does
25 that also give you pause in our ability to defend ourselves

1 and our allies?

2 General Nahom: Sir, I would say what Russia and China
3 are doing with their forces and how they are posturing and
4 their aggressive behavior at times, does give me pause
5 continuously. Yes, sir.

6 Senator Scott: Okay. Can you give me some examples of
7 the President's budget where it is going to give you
8 confidence that we are getting better prepared, rather than
9 less prepared. Any of you?

10 General Guastella: Well, sir, there are definite
11 things we are doing to improve in our readiness and we have
12 been working on that for several years now to increase our
13 ability to fight today. But we are also looking at our
14 ability to fight in the future and we are not just looking
15 at combatant commander risks today, by in the dialogue of
16 risk, we are talking about today's risk, combined with
17 future risk.

18 And the work that we have been doing is actually,
19 almost the same communication we are having right here in
20 this setting is talking about managing the risks today;
21 where should we accept risk today to allow aircraft to be
22 retired or monies to be shifted to areas where we can
23 modernize to keep pace or stay ahead of the China and Russia
24 threat.

25 So, I think those are areas of success, but like

1 General Nahom said, we are always at a shortfall for
2 resources in this environment and considering the demands
3 that are being placed on the Air Force across the spectrum
4 of warfare.

5 Senator Scott: Can you all talk about where you feel
6 like we are, as compared to Communist China and Russia with
7 regard to hypersonic weapons, are we doing a better job
8 developing hypersonic or are they doing a better job?

9 General Richardson: I would say we are ramping
10 quickly, Senator. So, this particular budget that we just
11 put forward, we have the ARRW program, which is going to go
12 into production in fiscal year 2022; that will be the first
13 operational hypersonic weapon. Not just that, but we are
14 also starting are the HACM program, which uses a different
15 flight profile to produce risks and to cause confusion for
16 the enemy on having to handle two different delivery
17 mechanisms. So, I think we are catching up very, very
18 quickly.

19 So, whether we are at parry or not, I can't say. I do
20 know that we are getting after it. We are applying a
21 significant amount of resources the last few years towards
22 that over.

23 Senator Scott: Thank you.

24 Senator Duckworth: Now, my partner who recently went
25 to Taiwan with me, our senator from Alaska, Senator

1 Sullivan.

2 Senator Sullivan: Thank you, Madam Chair, and thanks,
3 again, for your leadership. I really appreciated the trip
4 that we took together. I think it made an impact.

5 You know, when the Chinese Communist Party's
6 mouthpiece, the Global Times, is calling a trip by three
7 U.S. senators a vile provocation, and what else did they
8 call it? It was pretty --

9 Senator Duckworth: I don't know. My response was,
10 Hooah.

11 [Laughter.]

12 Senator Sullivan: Our response was, Oorah, but, you
13 know, the same, similar.

14 [Laughter.]

15 Senator Sullivan: It was actually, I think very
16 impactful, so thank you very much for that.

17 So, gentlemen, I am a big, big fan of the Air Force.
18 You guys have a tough job. I am just going to state it
19 right here: this budget is unacceptable in my view and you
20 have to come up here and defend it. That really sucks for
21 you, right, because you don't like the budget. You don't
22 have that say that, but I know you don't like the budget. I
23 don't like the budget. Hopefully, the chair doesn't like
24 the budget. I know the ranking member of this committee
25 doesn't like the budget.

1 It is a cut, inflation-based cut to our forces when the
2 Biden administration is doing double-digit increases to
3 other federal agencies. Those are all facts. You have to
4 come up here, suck it up, try to defend a budget you don't
5 like.

6 But I am going to be a little harsher on the Air Force
7 than I typically am, because I am a pretty big advocate.
8 Here is the issue, JPARC is, I think, and I have heard it
9 from the chief of staff and everybody else, one of the most
10 important ranges in our inventory because it is huge. Like
11 everything else in Alaska, it is huge. Airspace is bigger
12 than Florida. You can do fifth-gen standoff training that
13 we are going to need, increasingly.

14 And Admiral Aquilino just talked about modernizing our
15 ranges as really important. Chief of Staff, General Brown,
16 just last week in a question I had for him, gave me his
17 commitment, which he has given many times, on prioritizing
18 and accelerating the investments in JPARC and the Nevada
19 Testing Range.

20 But here is my issue, and I am just learning about it
21 today, and I am actually quite ticked about it. In March of
22 2020, the Air Force submitted a report on the modernization
23 of JPARC and the NTTR and said the goal was to get complete
24 modernization, fifth-gen modernization by fiscal year 2026,
25 okay. That is pretty far out there, but that was the

1 commitment about a year ago.

2 Today, I am learning in this hearing, your joint
3 statement for the record indicates current Air Force
4 planning now extends this much-needed modernization to
5 fiscal year 2032. So, I am just learning you bumped it 6
6 years. The Chief of Staff of the Air Force last week said
7 he was prioritizing this modernization and now we are going
8 to be a decade out, and that is completely unacceptable.

9 You want to talk about a high-end fight with fifth-gen
10 fighters, why am I learning about this today in this hearing
11 and what the hell is the Air Force doing, bumping this 6
12 years when the Chief of Staff of the Air Force, twice in the
13 last year, has said that this is a priority in
14 modernization?

15 Is this another self-inflicted wound of the Biden
16 budget crushing our military, crushing our readiness?

17 I really want an answer here, gentlemen, and I find
18 this completely unacceptable. What the hell, how did this
19 happen, 6 years?

20 General Nahom: Sir, I would say for the ranges right
21 now, I know where the Chief of Staff was just here last week
22 about the NTTR and the JPARC, when we look at our resources
23 across all our ranges, we had to prioritize this year and we
24 correctly put the NTTR and the JPARC as our top two.

25 Senator Sullivan: Uh-huh.

1 General Nahom: And then there are going to be a series
2 of ranges just below that. So, the NTTR and the JPARC, our
3 intention is to get those to what we call a threat-level 4
4 so you can actually train at that level --

5 Senator Sullivan: By 2026. That is what your goal was
6 last year --

7 General Nahom: Yes, sir.

8 Senator Sullivan: -- a year ago, almost to the day.
9 So, what happened?

10 General Nahom: Sir, and I would say as we look --

11 Senator Sullivan: By the way, you didn't bump it 1 or
12 2 years; you bumped it 6 more years. Like, what happened?

13 General Nahom: Sir, as we modernize the ranges, the
14 concern is not only the threat emitters, which are so
15 important, that we are trying to modernize for the JPARC for
16 the NTTR, as well as, we have to look after the adversary
17 air, because if those F-16s are going to timeout in the next
18 handful of years.

19 Senator Sullivan: Right.

20 General Nahom: And right now, we are aggressively
21 looking at the plans to make sure that the JPARC is our
22 exquisite training ground, because that and the NTTR truly
23 are, especially for the Pacific Forces.

24 Senator Sullivan: Again, you are not answering my
25 question, General, with all due respect.

1 This went from a 2026 timeline to a 2032 timeline and I
2 just found out about it today. Why did you bump it 6 years?

3 General Nahom: Sir, for the exact breakdown of what
4 was delayed, to bump it out, I will have to take that for
5 the record and get back to you and your staff.

6 Senator Sullivan: Again, it is not 1 year, not 2
7 years, not 3 years --

8 General Nahom: Yes, sir.

9 Senator Sullivan: -- you bumped it more than half a
10 decade. Do we have half a decade to get our fifth-gen
11 fighting fleet ready to compete with China and Russia?

12 I don't think so. That is actually a decade from now,
13 1 decade from now. I don't think this is even remotely
14 acceptable. We need answers.

15 Madam Chair, this is a huge issue and with all due
16 respect, gentlemen, and, look, I love the Air Force. I know
17 you guys have served for decades, but this is completely
18 unacceptable. We need details and answers, and I am going
19 to ride the Air Force really, really, really hard on this,
20 hopefully, in conjunction with the chair and the ranking
21 member, to get answers to this issue. I literally walked in
22 here and just found out about it.

23 General Nahom: Yes, sir. We will get those questions
24 answered for the record, sir.

25 Senator Duckworth: And via Webex, Senator Rosen?

1 Senator Rosen: Well, thank you, Chair Duckworth,
2 Ranking Member Cotton, for holding this hearing.

3 And I appreciate the witnesses for your being here
4 today to testify and, of course, for your service to our
5 nation.

6 I would like to speak a little bit about the MQ-9;
7 again, of course, it is really important in Nevada. So,
8 General Guastella, the MQ-9 Reaper is critical to supporting
9 our current intelligence, surveillance, and reconnaissance
10 requirements. A key part of the MQ-9 architecture is their
11 mission at Nevada's Creech Air Force Base.

12 Last year, CENTCOM commander, General McKenzie,
13 included additional MQ-9 funding at the top of his unfunded
14 priorities and in April he told the Armed Services Committee
15 of the MQ-9's importance and his need for more of them, not
16 fewer.

17 The Air Force today still lacks the ISR capacity to
18 meet combatant commanders' requirements contained in the
19 2018 National Defense Strategy. Despite this, the
20 Department has proposed cutting this platform, their most
21 cost-effective, without a program of record, without a
22 program of record to replace it, which would reduce, which
23 would risk further widening the ISR capability gap.

24 So, General Guastella, Secretary Austin told me during
25 the DOD posture hearing that the Air Force is reducing the

1 number of MQ-9 lines, but not the number of tails. I am
2 curious why there is any reduction at all when the Air Force
3 today still lacks the ISR capacity to meet combatant
4 commanders' requirements.

5 Can you please explain this counterintuitive strategy,
6 reduction strategy, and is there something that is going to
7 replace the MQ-9 with a new program?

8 General Guastella: Thank you, Senator, I appreciate
9 that question.

10 And I absolutely share your observation that there is a
11 tremendous demand for airborne ISR across the combatant
12 commands, and it is difficult to get at that requirement
13 with the force we have.

14 I will share this, though, also. Our MQ-9s have done
15 incredibly well for decades now in the fights that we have
16 been in and they are doing very, very well today. But the
17 requirements for our ISR enterprise is we have aircraft that
18 are persistent and connected. We have that today. But they
19 also have to be survivable.

20 And it is important that we balance the fleets of ISR
21 that we have between today's capabilities and a
22 modernization effort to get after a peer competitor, because
23 that is not something the MQ-9 was designed to do. And so,
24 while we can't talk about all of the options here in this
25 forum, we would welcome to come back to you and discuss

1 where we intend to go with the ISR enterprise in a different
2 setting.

3 Senator Rosen: Thank you. I would like to set up a
4 classified time to speak with you about a possible next-
5 generation program, if it is going to replace it.

6 But the time I have left, I would like to talk a little
7 bit about wildfires because wildfire season is upon us on
8 the West Coast. We know that every state in the West is in
9 extreme drought, not going to get any better.

10 And so, General Nahom, the Nevada's Air National
11 Guard's 152nd Airlift Wing in Reno, they fly, like, C-130s
12 to some of the hottest temperatures, the highest elevations,
13 the most challenging mountainous environments of any C-130
14 unit. And integral to their mission is flying the Modular
15 Airborne Firefighting System, the MAFS, and in support of
16 the U.S. Forest Service.

17 Like I said, this wildfire season is predicted to be,
18 unfortunately, some of the worst that we have ever seen.
19 And so, upgrading the Nevada Air National Guard C-130H fleet
20 with the C-130Js would have substantial impact on their
21 readiness and their firefighting capabilities, not just in
22 Nevada, but across the entire Western United States, which
23 it is just so critically important.

24 I was really discouraged the Air Force was not
25 considering MAFS when evaluating base candidates for the C-

1 130J, and even more disappointed when Reno wasn't selected.
2 But last week, I was heartened when Acting Secretary Roth
3 told me his committee would work with me to see if there are
4 ways that the Air Force can give some consideration, and
5 General Brown committed to having MAFS considered as one of
6 the criteria for base candidates for the C-130J.

7 So, General Nahom, can I get a similar commitment from
8 you, because we need to look at many mission sets that our
9 National Guard has, this just being one of them, for us in
10 Nevada, supporting the up and down the West Coast. And can
11 I get that commitment that you will forward that?

12 General Nahom: Yes, Senator, absolutely.

13 We work very closely with the Guard and the C-130
14 community to make sure we are prioritizing and taking into
15 account the special missions of the C-130 fleets.

16 Senator Rosen: Thank you.

17 I really appreciate that because we have some of the
18 longest, roughest terrain to travel and our Guard does a
19 tremendous job with the resources they have, and we need
20 even more.

21 Thank you, Madam Chair. I yield back my time.

22 Senator Duckworth: Thank you.

23 Senator Hawley?

24 Senator Hawley: Thank you, Madam Chair.

25 Thank you, gentlemen, for being here. Thank you for

1 your service to our country.

2 I want to get to China, but I want to start with the C-
3 130Js, where Senator Rosen, the topic she was just on.
4 General Nahom, General Richardson, give me a sense of how
5 the Air Force is determining the number of C-130Js that are
6 required across the active force and the Air National Guard.

7 General Nahom: Sir, the total number right now we are
8 looking at as an Air Force, I mentioned in my opening
9 statement was 255. If you break that down by the C-130Js we
10 either have now or are currently on order, that is about 163
11 aircraft. That leaves 92 C-130Hs that we would fully modify
12 for our fleet of 255.

13 That is obviously subject to change. As we said,
14 getting to 255 is a stretch goal. That is if we can get
15 that with mutually agreeable replacement missions and we may
16 not get there and we understand that. But we believe that
17 163 is a good number.

18 We have to be careful as we take on new C-130Js, that
19 comes obviously at a cost to what we could do with that
20 money for other areas that we are, frankly, carrying greater
21 risks than on the C-130 platform.

22 Senator Hawley: Got it. The 139th Airlift Wing at
23 Rosecrans in Missouri has done outstanding work with the C-
24 130Hs, as I am sure you know, of countless disaster-relief
25 operations, regular deployments to Europe, to CENTCOM,

1 PACOM. I would hope and expect that the 139th would be at
2 the top of the list as you think about additional, future
3 locations for the C-130Js.

4 Can I have your commitment that you will work with me
5 on that and consider us in Missouri for --

6 General Nahom: Yes, Senator, absolutely.

7 Senator Hawley: Great. Thank you.

8 Briefly, on the A-10, back to your divestment plans
9 there, what are the Air Force's plans for the 442nd Fighter
10 Wing at Whiteman Air Force Base, also in my home state, as
11 you continue to scale down the number of A-10s that you
12 have?

13 General Nahom: Right now, sir, our plan over the next
14 2 years is to go down 63 airplanes and, as I said, from nine
15 to seven operational squadrons. What is at Whiteman is part
16 of those seven, so that is part of the group that is
17 staying.

18 The two squadrons that would come down would be the one
19 operational squadron at Davis-Monthan, and the one
20 operational squadron at Fort Wayne, Indiana, which is on, we
21 are on track right now to convert them to the F-16.

22 Senator Hawley: Got it. That is great. That is very
23 helpful. Thank you.

24 Let's shift to China. If China is our pacing threat,
25 and I think that you have been little bit clear about that,

1 certainly, the Secretary has been, General Millie has been,
2 then I would say that defeating a Chinese fait accompli into
3 Taiwan has got to be our pacing scenario, and no other
4 scenarios is as urgent or important and no other scenario
5 poses as great a challenge, frankly, I think to the Joint
6 Force, than the fait accompli does in Taiwan.

7 So, with that in mind, General Brown testified last
8 week that the United States must maintain its ability to
9 deny a Chinese fait accompli against Taiwan. My question
10 for you is, how is the Air Force incorporating that specific
11 scenario into your capabilities-development process?

12 General Nahom: Sir, I think, especially if we can come
13 back in a classified setting, show you our war game and I
14 think you would be very pleased that we are absolutely using
15 the pacing threat, China, with the hardest scenarios in all
16 of our war gaming. And that is directly influencing our
17 investment options right now when you look at how we are
18 organizing our strategy and design and how we are going to
19 implement that into our POM.

20 And that is why you are seeing our chief talk about
21 that two-bomber fleet, getting to the B-21 quickly and those
22 modifications of the B-52 with the long-range weapons.
23 Getting to that four-fighter fleet, very controversial
24 replacing the F-22 with the next-generation air dominance to
25 get at that toughest problem. So, I think you are seeing

1 that, as well as in our ISR design, that we will not be able
2 to discuss in this forum, but I think that you will see that
3 that pacing threat with that toughest scenario is absolutely
4 influencing our investment.

5 Senator Hawley: Great. I would love to follow-up with
6 you and get a brief in the appropriate setting.

7 Can we talk about LRASMs for a second? Your budget for
8 last year requested five. Your budget this year, unless I
9 am mistaken, requests zero.

10 I asked General Brown about this. He said that the Air
11 Force isn't buying any LRASMs this year because it is
12 focused on hypersonics.

13 My concern is, is it fair to say that hypersonics are
14 not a 1:1 replacement for LRASMs, because even if we do use
15 them to go after Chinese surface targets, for example, they
16 are so expensive, we won't be able to field them at a scale
17 that we could with LRASMs.

18 Help me understand the thinking here, the trade-off.

19 General Nahom: Yes, sir. And LRASM is an important
20 weapon and we actually have that in mind with all our future
21 scenarios.

22 There are other ways we can get at surface ships, as
23 well, and we will have to get to a classified setting, but
24 there are other, we are absolutely invested and committed to
25 advanced weapons. And we have to be really careful we don't

1 buy a lot, you know, with our fifth-generation and sixth-
2 generation platforms, we don't go flying around with third-
3 generation weapons; we are very cognizant of that. And I
4 think that you will see that in our classified investment.

5 Senator Hawley: I appreciate that and I look forward
6 to that. And what I am driving at is just making sure that
7 we are able to maintain a very robust sea-denial capability.
8 Because it seems, again, in the pacing theater, and with, in
9 your words, the most challenging threat, that is the pacing
10 scenario, sea denial seems to be pretty key.

11 So, what you are telling me is that you are absolutely
12 focused on that and on the ball?

13 General Nahom: We are certainly focused on that
14 scenario, sir, of the most challenging scenarios and with
15 the pacing threat, yes, sir.

16 Senator Hawley: Very good.

17 All right. My time has expired. Thank you.

18 I look forward, and I will follow-up with you about the
19 briefing.

20 Thank you, Madam Chair.

21 Senator Duckworth: Thank you.

22 And now joining us via Webex, Senator Manchin.

23 [Pause.]

24 Senator Duckworth: All right. He is not there.

25 I will take the next questions --

1 Senator Manchin: Thank you, Madam Chairwoman.

2 Senator Duckworth: Oh, there he is.

3 Senator Manchin: Thank you. Thank you. Thank you. I
4 appreciate it. I am so sorry. I had a little technical
5 difficulties there.

6 Let me start out with, if I can, with Lieutenant
7 General David Nahom. General, I would like to bring your
8 attention to an issue that is very dear to me is the Airlift
9 Wing in Martinsburg, the 167th Airlift Wing in Martinsburg,
10 West Virginia.

11 They are currently down one hangar, I am sure you are
12 aware of that, to structural issues, which, as I am
13 understanding, greatly impacting their ability to carry out
14 their maintenance on their fleet of C-17 aircraft. And I
15 worry that this is isolated, to my understanding, across the
16 Air National Guard, which is even more concerning, when you
17 take into account that the Reserve component maintains over
18 70 percent of our military's tactical airlift capability.

19 And the only thing I can ask you if that has been
20 brought to your attention and if you can give me any type of
21 timetable or if you will look into it.

22 General Nahom: And, sir, I would say that specific
23 issue with Martinsburg, I do not have the data on that
24 actual issue and I will definitely take that for the record
25 and get back to you and your staff on that one.

1 But what I will say, though, if you look at our
2 facilities modernization and sustainment accounts, we call
3 it FSRM, this is a challenge. We have a lot of
4 infrastructure in the Air Force and the resources and the
5 funds are a challenge to keep up with all the facilities --

6 Senator Manchin: General, if you could give us a
7 backlog on deferred maintenance, it would be very helpful,
8 sir. We could see how we could help you.

9 General Nahom: Yes, sir, absolutely. We will take
10 that for the record with your team.

11 Senator Manchin: Okay. The tactical and operational
12 reliance on satellite communications is deeply understood by
13 our adversaries. I am concerned of their future efforts to
14 interrupt that vital link between those on the ground, the
15 air, and the space.

16 I think we both can agree that timelessness and
17 accuracy of data transmissions increase survivability
18 substantially by prioritizing support to the joint
19 warfighter and the interoperable integrated enterprises.

20 So, what are your priorities to support the joint
21 warfighting concept, as it relates to space operations?

22 General Guastella: Sir, General Guastella here to take
23 an attempt at it.

24 For starters, we are very excited for the Department of
25 the Air Force to include the Air Force and Space Force's

1 participation and engagement in development of the joint
2 warfighting concept, and it really is illuminating the
3 differences in how we are going to fight in the decades
4 ahead. And in every service, it offers opportunity to
5 demonstrate desired areas of transformation and, most
6 importantly, how we will integrate and keep that competitive
7 edge in the future.

8 A huge aspect of it is modernization and, obviously, we
9 have talked before about aircraft modernization, but,
10 certainly, we are very, very reliant on our SATCOM,
11 satellite communications. And while I will have to get back
12 to you with a more detailed answer from the Space Force
13 side, as I noted, it is the Department of the Air Force, we
14 are working together to not only defend our capabilities,
15 but also have offensive capabilities to keep that
16 competitive edge on orbit.

17 Sir, pending any questions?

18 Senator Manchin: Okay. General Richardson, this year
19 has demonstrated very publicly, the threat posed to our
20 critical infrastructure from malign cyber actors, and part
21 of that critical infrastructure, as you know very well, is
22 Defense Industrial Base.

23 So, how does the budget reflect your plans to integrate
24 cybersecurity measures into each new and legacy system
25 within the Air Force?

1 General Richardson: Thank you for that question.

2 I would attack that a couple of ways. The Department
3 has got a CMCC program that is in place now to make sure
4 that the Defense Industrial Base has got the protections in
5 that they need on the cyber. Another thing that we are
6 doing, also, is this idea of digital acquisition where we
7 are taking more ownership of the tech decks that we are
8 developing our weapons systems in.

9 So, agile software, for example, the systems that we
10 are using, the tech decks that we are working on come with
11 continuous authority to operate, as long as the Defense
12 Industrial Base and the Government are using those systems.

13 So, we are trying to attack it through a couple of
14 different ways. Not just the requirements on the systems,
15 themselves, but also in how we are actually developing the
16 systems, using these digital acquisition tools. Thank you.

17 Senator Manchin: Thank you.

18 General Guastella, it is vital that we have a
19 modernized nuclear deterrent to include the NC3 enterprise
20 that is ready and capable to execute at any time. At the
21 same time, we have rapidly aging and outdated systems to do
22 that job with, such as the E-4B and the E-6B.

23 So, do the age and lack of some modern capabilities on
24 these platforms pose a risk to us right now in guaranteeing
25 the ability for us to employ our nuclear forces when we

1 choose?

2 General Nahom: And, Senator, it is General Nahom, I
3 will take a swing at this one.

4 So, obviously, the E-4B and our Nuclear Command
5 Control, that is a big part of our nuclear recapitalization
6 that is going on right now, and I think you will see that
7 with our investment in the E-4, specifically, the E-4 recap,
8 as well as other aspects of our NC3.

9 So, it is certainly something that is clearly on our
10 mind. Not just the weapons, for our nuclear
11 recapitalization, but the command and control is an Air
12 Force responsibility that we are taking very seriously.

13 Senator Manchin: If you could keep us informed, sir,
14 on the timeliness of when you think that is going to be
15 accomplished and what your timetable is to get it done.

16 General Nahom: Yes, sir. We will get back to you in a
17 classified setting with a timetable.

18 Senator Manchin: Thank you very much, sir.

19 Thank you, Madam Chairwoman.

20 Senator Duckworth: Thank you.

21 Senator Kelly?

22 Senator Kelly: Thank you, Madam Chairwoman.

23 General Nahom, the Chief of Staff of the Air Force has
24 said that the F-35 will remain a cornerstone of the Air
25 Force fighter inventory today and into the future.

1 The Air Force's fiscal year 2022 budget request
2 includes funding for the procurement of an additional 48
3 aircraft, bringing the Air Force F-35 inventory to 376. I
4 support the F-35 program. I have been very impressed with
5 the capability. I had an opportunity to get in the
6 simulator a few weeks back.

7 I am also concerned, though, that we still don't have a
8 firm grasp on how to reduce the costs for this program. The
9 GAO report released in April found that there is a
10 difference of \$3.7 million per aircraft between actual
11 sustainment costs and with the services, project they can
12 afford over the program's life cycle. By 2036, this gap
13 will lead to a total overrun of \$4.4 billion, and that is
14 for the Air Force alone. And the GAO estimates that the Air
15 Force will need to reduce expenses by 47 percent to bring
16 costs to a level that the service can sustain.

17 So, General, what is your understanding of the main
18 factors that are driving the high program costs today and
19 what efforts has the Air Force taken to reduce these costs
20 to ensure that by 2036, it does not exceed the ability to
21 maintain the fleet?

22 General Nahom: Sir, I will start on that and then I am
23 going to turn it over to, General Richardson has a lot of
24 really good specifics on this.

25 It is a concern, when you look at the F-35. As the

1 chief said, it is the cornerstone. We are very pleased with
2 the F-35's performance. There are some things, increased
3 performance we need to get out of it with TR3 and Block 4
4 that you are very familiar with.

5 The operation sustainment costs and the ONS costs are a
6 concern. When you look at those estimates you were talking
7 about, those were estimates that we made a long time ago and
8 they were not accurate. We are seeing out of the airplane
9 right now, at a higher price point for ONS than we had
10 anticipated nearly 20 years ago when we made some of these
11 assumptions.

12 But when you look at the costs, the manpower and the
13 consumables are probably the two things that we can actually
14 affect, we are certainly getting after it.

15 I am going to turn it over to General Richardson,
16 because he has more specifics on some of the programs going
17 forward on that.

18 General Richardson: Yeah, thank you, Senator.

19 I then if you bucketed the costs, this really comes
20 down to just four things. The first is just consumables and
21 repairables, things that break. So, there are lots of
22 things you can do there. You can make them break less and
23 you can make sure that you have the repair capability for
24 them when they do break.

25 Manpower, it is manpower and tested-weapons system. I

1 think as we mature the weapons system, those numbers will
2 come down. We expect them to come down but right now,
3 General Nahom is having to apply a lot of blue-suit
4 maintenance to maintain them.

5 The third one is fuel. That is a bit uncontrollable.
6 I guess it is what it is. The manpower and the fuel make up
7 a good portion of the ONS cost on it.

8 And the fourth one is just the sustaining support. I
9 think the two that we are really going to try to attack are
10 the consumables and the repairables and then the sustaining
11 support where we are kind of needing, you know, Lockheed
12 help sort of maintaining the aircraft.

13 And so, there are a number of things that we are doing.
14 We are attacking it pretty heavily. One of the things we
15 are doing is we are negotiating right now to, on the 3
16 years, instead of, like, annual contract, a 3-year
17 sustainment contract that actually has performance
18 incentives in it. That is the first thing we are doing.

19 The second thing we are doing is we are doing what is
20 called a business-case analysis to see what is the best way
21 to attack those four levers, that I just talked about. That
22 may lead to a change. It may not. I don't know yet. That
23 is ongoing. It will conclude this summer.

24 We are also looking at kind of a whole host of
25 different contracting mechanisms. I would be remiss if I

1 also didn't mention the engine. So, as you may know, there
2 are a lot of, I won't say a lot, I think there is -- General
3 Guastella, I think it is 30-some-odd holes that we are faced
4 right now with on the engine. So, we are also working to
5 make the, you know, to looking at our spares posture on the
6 engine, doing a number of things there.

7 But, I can assure you that we are not happy with where
8 we are at. General Brown is certainly not happy, but we are
9 also not sitting around waiting; we are working very closely
10 with the Joint Program Office, General Fick, to bring those
11 costs down. I think we are going to make a lot of headway.
12 I don't know if we will close the gap entirely that General
13 Nahom needs us to close, but I know that darn well, we are
14 going to make a very solid run at it.

15 Senator Kelly: General, on the consumable-repairable
16 side of this, other than the issues with the Pratt & Whitney
17 engine, is there any specific parts that are just
18 experiencing other, like, high-failure rates that are a
19 larger percentage of the consumable-repairable costs?

20 General Richardson: We are having issues in a couple
21 of areas, like canopies is an issue. It is not so much
22 that. Actually, when this jet flies, it lands what we call,
23 Code 1; it lands green, ready to go for another sortie most
24 of the time. And that speaks --

25 Senator Kelly: And my understanding is about the same

1 as an F-16 or --

2 General Richardson: Yes, sir.

3 Senator Kelly: -- any other fighter.

4 General Richardson: What we are working on right now,
5 though, is when it does break, it tends to stay down for a
6 very long time. And that is because we haven't stood up the
7 repair infrastructure. We should have gotten started on
8 that, frankly, a lot sooner than we did, and so that is the
9 part that we are really attacking.

10 What I am talking about is the depots to actually
11 repair the parts, whether they are government depots or they
12 are contractor depots, we need to get those depots stood up
13 so that when the part does repair, we can get it replaced
14 quickly and back into the jet.

15 Senator Kelly: I understand.

16 And I am also very interested and looking forward to
17 seeing the TR3, Block 4 capability when that comes online.
18 Thank you.

19 Senator Duckworth: Thank you.

20 I join Senator Kelly in my concerns about the time on
21 wing costs with the F-35 engine, as well as the overall
22 costs. I think it is going to affect your ability to buy
23 all the 1,763 aircraft that you plan to buy.

24 Senator Peters?

25 Senator Peters: Thank you, Madam Chair.

1 Thank you, gentlemen. It is good to see you here
2 today. I just have a few questions.

3 First off, with respect to aerial, unmanned refueling,
4 two weeks after the MQ-25 successfully refueled an F/A-18,
5 the Air Force issued a sources sought announcement for a
6 bridge tanker that could, I think the operative word is
7 "could," could be unmanned. This seems a little bit
8 undefined as I look at that.

9 And so, my question is, how does this reflect on how
10 the Air Force views unmanned refueling, generally?

11 General Nahom: Sir, you know, I would say there is a
12 lot of opportunity here. And when watching the MP-25 fly,
13 it is pretty exciting.

14 I think where we are with the KC-46 right now and
15 getting the RVS 2.0, and I will let General Richardson add
16 to this, we are actually going down that road with a
17 technology that will allow us to do unmanned refueling on a
18 larger scale, that the Air Force needs.

19 Now, for the bridge contract, once we get to 179, the
20 bridge is to allow us a bridge to what next technology is
21 out there. So, we are just now starting to look at, to
22 assess what that is going to look like, even though we have
23 several years left for production on the KC-46.

24 But, General Richardson, over to you for the --

25 General Richardson: I think General Nahom got it

1 right. The bridge tanker is exactly that. We are looking
2 at, largely, non-developmental items, though. So, we are
3 not looking at something that is going to require a lot of
4 time and effort to develop and so we are starting that
5 process early.

6 We do expect to progress down. We do think we are on a
7 path to fix the RVS 2.0. We do think we have a very good
8 contract in place for 13 lots of 179 KC-46s that we think we
9 have a very good price on. Even the thirteenth lot is
10 capped in price.

11 This effort here, would then, kind of pick up at that
12 point to bridge us to something that might look something
13 like what you had mentioned, maybe something, you know,
14 uncrewed, for example. It doesn't mean that we wouldn't
15 look for an uncrewed on this bridge tanker.

16 The bridge tanker effort right now is really just, we
17 are just kind of collecting information. It is in the very,
18 very early stages. We will be at this for a few years,
19 trying to figure out what our actual requirement is.

20 The responses to those requests for information will
21 help inform our requirement as we get closer towards the end
22 of the KC-46 procurement.

23 Senator Peters: And my next question is related, as we
24 move forward with these new technologies, and I know the Air
25 Force is moving to divest itself of a number of legacy

1 aircraft and rely on the 4.5 design. But what it seems is
2 that we are going to have more installations than missions
3 as that continues to move forward.

4 So, General Nahom, the question to you is, how does the
5 Air Force plan on transitioning these installations, which
6 may be losing their legacy missions, to align them with the
7 Air Force's modernization strategy so that they can continue
8 to have a meaningful role in the Air Force?

9 General Nahom: Sir, I would say, thank you for the
10 question.

11 We are actually working very closely with the units and
12 the locations as we do modernize, because as you rightly
13 said, there is legacy equipment we are going to be taking
14 out of the Air Force, but there is new equipment coming in
15 and there are new missions coming in, as well. And I think
16 it is not about removing locations or removing units.

17 There is going to be some repurposing units into modern
18 ways of fighting as we, for example, step out of the older
19 F-16s and the older F-15s and step into the F-35s and then
20 eventually NGAD and some of our ISR items, as well. Some of
21 these bases are going to look very, very different, but
22 right now, we are not seeing a lot of bases that are going
23 to be going away and locations and units that are going
24 away, but we do see some change in mission out there. I
25 think it is actually fairly exciting as we look forward.

1 Senator Peters: So, as the missions change, but I
2 would -- you can comment if you are looking at phasing out
3 legacy aircraft, so a base that has a flying mission, if new
4 flying missions are coming onboard, you would try to focus
5 those on those bases that are losing a flying mission to get
6 the new mission, would that be a fair assessment?

7 General Nahom: Yes, sir. It is actually not just to
8 keep that base in business, but we actually, we have a --
9 there is a big advantage to this. We just did this with the
10 F-15C, our single-seat F-15s. As they came out of service,
11 we did a very holistic look at the new airplanes coming in,
12 because as these locations are there and the units are
13 there, we take advantage of not only the facilities that are
14 already there, but you take advantage of the human capital
15 that is at a lot of these locations, especially in the Guard
16 and Reserve, absolutely. Because that is how we save
17 resources, by taking advantage of what is already there at
18 these locations with the new missions coming in.

19 Senator Peters: So, for example, if you had an A-10
20 squadron that was going away, you would look at that base as
21 being a priority place to put an F-35 squadron, perhaps?

22 General Nahom: Yes, sir. Right now, we are looking
23 at, as we bring new fighters on, and if you look over the
24 last couple of years and looking forward the next few years,
25 there are actually more fighters are coming into the Air

1 Force than are going away. So, we are going to be looking
2 for locations.

3 And I think you are seeing a lot of that with the F-15C
4 retirement, which is the most acute one, but you are also
5 seeing that down in Florida with Tyndall Air Force Base and
6 other locations, where we are taking advantage of the
7 runways and the facilities and the people that are there to
8 bring on these new missions. But, absolutely, sir.

9 Senator Peters: Great. Thank you.

10 Thank you, gentlemen. Thanks for your service.

11 Thank you, Madam Chair.

12 Senator Duckworth: Thank you.

13 This is the end of the first round of questions. I do
14 have some additional questions and I know Senator Sullivan
15 has indicated that he has some additional questions, as
16 well. So, I would like for us to continue at least until
17 16:00, which is when the hearing was supposed to go.

18 So, I am going to go ahead and ask my additional
19 question. I have to throw in a rotary-wing question because
20 I am here and there is no way we can just talk about fighter
21 jets all the time, all you high-speed guys flying around
22 that are way up in the Earth's atmosphere.

23 The Air Force has taken a long time to get around to
24 replacing the UH-1 helicopters in the force. At this time
25 last year, the Air Force was planning to buy MH-139s in

1 fiscal year 2022 and now, however, the Air Force does not
2 have any MH-139s in fiscal year 2022. I understand there
3 may have been some issues with FAA and certifications of the
4 helicopters.

5 General Richardson, can you explain what happened with
6 the program and was there an FAA-certification problem, and
7 if so, what are you doing to fix the problem or to meet the
8 need for the aircraft?

9 General Richardson: Yes, Senator, I would be happy to
10 take that question.

11 I wouldn't say that it is an FAA problem, per se. So,
12 because this is derivative of a commercial helicopter, we
13 are not going to lose, so to speak, the type certificate
14 that comes with that helicopter. So, we are going to modify
15 it with military equipment and systems and then we are going
16 to get supplement type certs that ride on top of that type
17 certificate.

18 This aircraft actually needs three supplemental type
19 certs. Type cert number three, supplemental type cert
20 number three has already been granted. One and two are
21 behind. The one we are most worried about is the second
22 one, and it has to do with there is a defensive system that
23 has a cell around it and it is causing some funny air
24 disturbances, and so we are working to understand those air
25 disturbances so that we can get this supplemental-type cert

1 for that.

2 So, it is not necessarily that the FAA is being slow or
3 anything like that; it is really just trying to work through
4 those technical issues. When we look at the program, it is
5 not ready for production.

6 So, here is a case where rather than just progressing
7 forward into production, we are just going to make sure that
8 we get that right and then we will put the production in
9 fiscal year 2023. Other than that, the program is going
10 pretty well. We just have to work through that one issue.

11 Senator Duckworth: Isn't it a fixed-price contract?

12 What happens when you don't buy it in fiscal year 2022?

13 General Richardson: It is a fixed-price contract, that
14 is exactly right, but they will have to meet the
15 specification requirements in order -- so, before we go into
16 production for lot one there, is a certain amount of entry
17 criteria that we have to get past in order to award the
18 contract. Boeing understands that.

19 Senator Duckworth: Okay. So, the Air Force will not
20 be penalized?

21 General Richardson: No, ma'am, absolutely not.

22 Senator Duckworth: There will be no costs, okay.

23 Thank you.

24 Senator Sullivan, you had additional questions?

25 Senator Sullivan: Thank you, Madam Chair.

1 I want to talk again, and, again, this goes to your top
2 line budget where you just had to make tough choices. It is
3 just really helpful for the committee to know, but the Air
4 Force's budget requests for this year reflects a decrease to
5 the flying hours program, and after factoring in reduced
6 buying power from inflation, a decrease in the weapons
7 sustainment system, and per a GAO report released just last
8 year, November 2020, the Air Force, with the exception of
9 hueys, has consistently not met mission-capable rates over
10 the past decade. I have the report right here.

11 So, can I get an explanation from you, gentlemen, how
12 the Air Force justifies reducing funding to these two
13 critical programs, flying hours, I think that is as critical
14 as it gets in terms of training our pilots, and the Weapons
15 Systems Sustainment program, when, according to the GAO, the
16 service is still struggling to meet its readiness goals,
17 particularly, in terms of flying hours.

18 Can I get any or all of you to take a crack at that.
19 And, look, again, if you are reducing flying hours and
20 training because of the budget, because the President, in my
21 view, put forward a stingy DOD budget, which he did, I would
22 appreciate hearing that. I know it is difficult to make
23 that statement, but we need to know.

24 General?

25 General Guastella: Senator, thank you for that

1 question.

2 Sir, you are absolutely right, you know, flying hours
3 are absolutely crucial to our readiness. And the biggest
4 issue that you brought forward points to one very important
5 thing and that is the age of our fleet. You know, at 28
6 years, average age, it is really hard to generate the
7 sorties, the rates, and the aircraft availability needed to
8 get after the training.

9 Senator Sullivan: Well, let me push back a little bit
10 here just to get down to what, the flying hours in this
11 budget are down by about 87,000 is what I am reading. So,
12 again, is that driven by the age of the fleet, as you just
13 mentioned, or is that driven by a stingy budget that doesn't
14 allow us to have enough flying hours? Which one is it?

15 General Guastella: Sir, we program flying hours based
16 on several things and first and foremost is what can our
17 maintenance, what is our ability to generate? That is a big
18 driver. We also have peacetime training requirements and
19 also forecast combatant command requirements.

20 And our goal is to try to get the most out of every
21 sortie that we can. And while there is no substitute to
22 flying, it is, you know, the crown jewel of training, there
23 is also a balance of how much we do in a simulation
24 environment, because I will be honest with you, these fifth-
25 gen and soon-to-be sixth-gen aircraft, very expensive flying

1 hours. And in simulation events, we can accomplish training
2 at a much lower cost, very little cost, that is very
3 available, weighs in, and so that is a balance that we --

4 Senator Sullivan: So, what is the driving the 87,000-
5 hour reduction?

6 General Guastella: I would say probably --

7 Senator Sullivan: And does the Air Force support that?

8 I can't imagine you three gentlemen, I am looking at
9 all of your bios. You all have thousands of hours of
10 flying, yourselves. I can't imagine that you are happy
11 about announcing 87,000 hours of reduced flying time.

12 General Nahom: Sir, I will expand on what General
13 Guastella said about the aging aircraft. And it is
14 discussing your other point at the beginning, sir, was WSS,
15 the Weapons Systems Sustainment.

16 Right now, WSS is going up, well in excess of
17 inflation. There are two main drivers of that. Number one
18 is the aging airplanes.

19 Senator Sullivan: You mean the cost?

20 General Nahom: The cost, yes, sir.

21 Senator Sullivan: I see.

22 General Nahom: In fact, it is actually approaching
23 almost a billion dollars a year, just in increased costs.

24 In this year, in 2022, we are not able to fund that
25 increase and that is concerning, because that brings our

1 funded -- right now, we are going into this year, we are
2 funded approaching 87 percent of our WSS and that is going
3 to go down closer to 80 percent, and that is a concern.

4 What is driving that is the aging airplanes, that is
5 number one, and number two, is a lot of our new platforms
6 are coming on with a CLS, Contract Logistics Support, and
7 many of these contracts are expensive and it is driving
8 these increases to costs. The one way we are getting after
9 this in our budget, I believe, is this concentration on
10 recapitalizing our fleets to more modern aircraft that, as
11 General Guastella said, that we can fly at a higher rate so
12 we can generate those flying hours for our pilots. Because
13 as you said, they badly need flying experience. The
14 synthetic is good, the virtual environment, and we have to
15 do that, as well, but getting them in the air is--

16 Senator Sullivan: If we were able to plus-up this
17 budget, and I am sitting here with two senators who are
18 aviators who know this issue better than anybody, is that an
19 unfunded request if we put it in? You know, I am not
20 talking about the President, but I am talking about, you
21 know, the Congress ultimately has a say here.

22 Is this something that the Air Force would want to use
23 budget money over what has been requested by the President
24 to close that gap? Again, I can't imagine 87,000 hours of
25 reduced flying time is something that all of you or members

1 of this committee want. Is that something that you would
2 want to help address if we got you more money? Ask.

3 General Guastella: Sir, I think without a doubt, the
4 funding of Weapons Systems Sustainment is something the Air
5 Force would value a great deal.

6 Senator Sullivan: And how about the flying hours?

7 General Guastella: And, sir, those are hand-in-hand.
8 If we can fund the Weapons Systems Sustainment, that
9 generates aircraft availability that we can turn around and
10 lay in the flying hours for. So, those are interconnected.

11 And I can tell you, that would be greatly valued. You
12 know, air crews right now today out there are flying the
13 absolute minimum number of hours they need every month to
14 stay ready. We are offsetting that with simulation events,
15 but we are at the lowest we can be. We want to turn that
16 corner, and so we would value that investment in
17 sustainment, which will enable the increased flying hours.

18 Senator Sullivan: Great.

19 General Guastella: Sir, for what it is worth right
20 now, the team is doing fantastic out there. Despite COVID,
21 we are flying, we are at 96 percent of executing what was
22 laid in our budget in our flying hours this year. So, we
23 are working really hard, but those aging aircraft just make
24 it harder and harder.

25 Senator Sullivan: Okay. The GAO report makes it sound

1 like you are not hitting any of your readiness numbers.

2 But Madam Chair, thank you.

3 And I have an additional question that I will submit
4 for the record on the E-3s. Thank you.

5 Senator Duckworth: Without objection.

6 And now to a man who has flown more hours, more
7 distance around the Earth than any of us combined, Senator
8 Kelly.

9 Senator Kelly: Thank you, Madam Chairwoman.

10 A lot of miles, certainly, and a lot of time. And I
11 think to just follow-up on Senator Sullivan's comments, you
12 know, one of the things we do really well as a nation is we
13 understand how to use the equipment that we build. We build
14 great systems, great airplanes, great ships, great weapons
15 systems, great helicopters, and then we train really well,
16 and those flight hours do matter. They matter a lot.

17 Of the experienced I have had, you know, talking to
18 some foreign air force, we have in the Space Program, we
19 have a relationship with the Russians. When you talk to
20 them about the number of hours they spend in the cockpit,
21 not the same, which is good for us. That is true for a lot
22 of our adversaries.

23 We do well in the air and with these systems because we
24 train, so I think that is something we should follow-up on,
25 Senator.

1 General, I had the opportunity to go out and see NGAD
2 in April. Very impressive. I think the NGAD efforts will
3 help us outpace our adversaries who are also trying to
4 invest in advanced technologies. And I don't want you to go
5 into anything that could possibly be, you know, we should be
6 doing in another room, so let's not go there.

7 I am really pleased to see the non-traditional approach
8 being taken with this program, leveraging digital
9 engineering, agile development processes, digital design to
10 make sure we can develop and test and field these aircraft
11 at a faster pace. But I am also interested to find out what
12 your thought is on what impact that this non-traditional
13 approach will have on acquisition and life cycle sustainment
14 costs.

15 General Richardson: Senator, great question.

16 It is going to have a profound impact across the entire
17 life cycle. I will answer it two ways. The first way is
18 just specific to NGAD. Because of the way that we are doing
19 it, using the digital acquisition that you mentioned, once
20 we get into the product-support phase, which we always talk
21 about that being 70 percent of the life-cycle cost is in
22 product support, what if we could change that figure? What
23 if it wasn't 70 percent? What if we owned the technical
24 baseline such that we could actually compete more of that
25 work out in that 70 percent, such as less.

1 One thing I have learned in all my time doing this work
2 is competition is your friend, and so we would like to be
3 able to push that. So, there is a lot of effort or a lot of
4 benefits, digital acquisition from design, to actually
5 building the aircraft, to testing it, as you mentioned,
6 because we don't have to do as much live-flight testing, to
7 the sustainment part.

8 So, we believe, we have been talking a lot about
9 budgets today, we believe that how we build future systems
10 is going to help us get more out of the dollar that we do
11 get. So, I just gave you an answer specific to NGAD. But
12 what I will tell you also, the second aspect of the answer
13 is that we are seeing a change in the workforce. Folks are
14 seeing, hey, what is this all about?

15 So, another program, Stand and Attack Weapon, that
16 program is doing some revolutionary work in how it is going
17 about doing its business. So, we are starting to see this
18 thing hit a tipping point where everybody wants to do their
19 program using some of these techniques. And I think, in
20 fact, I think we are past that tipping point out, and so it
21 is going to have a profound effect all across the Department
22 of the Air Force. So, we have a bunch of guidance on how to
23 actually get after that.

24 NGAD is a great example. GBSD is another one. And,
25 SAW, Stand and Attack Weapon, it is doing the same exact

1 thing. And we are just going to kind of grow that ecosystem
2 of digital acquisition, if you will.

3 Senator Kelly: Do you have any goals in mind for
4 reducing development and acquisition costs?

5 General Richardson: It probably, I think that kind of
6 depends on the specific program. Each program will apply
7 these tools to a different level.

8 I think if you look at the T-7, you know, an idea to
9 flight in 3 years is pretty remarkable. Another aspect
10 about T-7 is just the fact that because you end up pushing a
11 lot more of the technical data to build the airplane out
12 into the suppliers, the assembly time on the airplane was
13 reduced to 75 percent. So, each of the phases, the design
14 phase, the build phase, the test phase, and then the
15 sustainment phase, we expect to get savings out of all of
16 those.

17 To answer your question, we haven't come up with a goal
18 necessarily, but each program will be a little bit different
19 in terms of how it applies it.

20 Senator Kelly: Thank you, General.

21 Senator Duckworth: Thank you.

22 Well, we are a little bit over time, but I want to
23 thank each of you for participating today and I think we
24 have some follow-up questions. But I really appreciate you
25 being here and answering our questions.

1 With that, this hearing is adjourned.

2 [Whereupon, at 4:05 p.m., the hearing was adjourned.]

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