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Committee on Armed Services

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TO RECEIVE TESTIMONY ON THE SCIENCE AND TECHNOLOGY PRIORITIES IN REVIEW OF THE DEFENSE AUTHORIZATION REQUEST FOR FISCAL YEAR 2027 AND THE FUTURE YEARS DEFENSE PROGRAM

Tuesday, May 19, 2026

U.S. Senate
Subcommittee on Energy Threats and Capabilities
Committee on Armed Services
Washington, D.C.

The subcommittee met, pursuant to notice, at 3:00 p.m., in Room SR-222, Russell Senate Office Building, Hon. Joni Ernst, chairman of the subcommittee, presiding.

Committee Members Present: Senators Ernst, Slotkin, Shaheen, Reed, Kaine, Peters, and Kelly.

OPENING STATEMENT OF HON. JONI ERNST, U.S. SENATOR FROM IOWA

Senator Ernst: Good afternoon and thank you for appearing today. The Subcommittee welcomes today Under Secretary of Defense for Research and Engineering and Chief Technology Officer of the DoD, Emil Michael; Deputy Assistant Secretary of the Army for Research and Technology, Mr. Chris Manning; Deputy Assistant Secretary of the Navy for Research, Development, Test and Evaluation, Mr. Dave Tremper; and Associate Deputy Assistant Secretary of the Air Force for Technology, Engineering, and Product Support, Dr. Janet C. Wolfson. Thank you all very much.

Our witnesses appear before us at a critical moment. China, Russia, North Korea, and the weakened Iranian regime continue to threaten U.S. interest, our forward forces, and the homeland. This Subcommittee has heard extensive testimony on the challenges we face, from China rapidly closing the gap in artificial intelligence to the risks posed by adversarial biotechnology. Today we are here to examine how the Department and the Services are working together to research, develop, and field the capabilities our warfighters need faster than our adversaries.

In Ukraine, we have seen the timeline from innovation to battlefield use shrink from months to minutes. U.S. small businesses can play the same role for our military,

and I look forward to hearing how the Department is leveraging their innovation and accelerating the transition of new technologies to the force. I also want to understand how lessons from recent conflicts are helping reduce the time it takes to deliver capability to the warfighter, and how we can help move even faster.

Our servicemembers performed heroically during operations against the Iranian regime, and I would like to hear how the Department's science and technology enterprise contributed to that success. From the first combat use of the LUCAS drone to advances in AI-enabled systems, the United States cannot afford to fall behind in harnessing the innovation and entrepreneurial strength we have here at home.

On the topic of AI there are two areas I would like to understand. First, I want to know where we stand when it comes to harnessing the best of what America's frontier labs have to offer for our national defense. These labs offer our warfighters a key advantage on the battle space, and I want to understand how we are engaging with them to make sure we are integrating them to the greatest extent possible. Then, second, I want to discuss leveraging autonomous systems.

Thank you, and I will now turn to the Ranking Member, Senator Slotkin.

STATEMENT OF HON. ELISSA SLOTKIN, U.S. SENATOR FROM Michigan

Senator Slotkin: Thank you, Senator Ernst. And sorry to make you wait there at the beginning. We were both voting, so that we did not have to interrupt you all again.

I am super interested in this hearing and really appreciate everyone being willing to come and talk about this. I know that it is often complicated to do that in an unclassified setting. We had a classified briefing on the classified AI race, particularly vis-à-vis China not so long ago.

But I think it is important that we start to have this conversation out in public as much as we can, because the public should be invested and understand that this is actually a race, similar to races we have had in the past, such as the nuclear race. Who gets to the most capable AI first does really matter, and I think people need to understand that as they struggle to understand what AI is going to need just back here at home.

As I understand it, the Chinese are about 6 to 12 months behind us, which sounds like both a little and a lot, depending on how well you know this topic. And I think it is hard to overstate how AI is going to change how we fight wars, how we think and engage in conflict, who wins and what the definition of winning is. And unlike

warfare of the past, this new kind of wave is being led by private sector companies. It is not government-funded labs or research institutions that are coming up with all the stuff. It is the private sector, a number of companies who are cutting edge, and you all, in your various departments, have to manage those relationships and make sure we win, even though you do not control the things that go on at this private sector company.

I really believe in our potential to win the fight, and I just will not give in to people who have like a dark cloud over this race. But I do think it is going to come down to people, chips, and power, and making sure we have those key ingredients, that we have the best people and ideas, the most capable chips, and we have power, meaning energy, in order to support that future.

I will save my questions until our multiple rounds here, but I appreciate everyone and what you do. We are all invested, in a bipartisan way, in being successful, so thanks for being here.

Senator Ernst: Yes, thank you, Ranking Member. And we will start now with opening statements from witnesses. We will start with Secretary Michael, and we will just proceed across the dais here. So if you would, you are recognized for 5 minutes, Secretary.

STATEMENT OF THE HON. EMIL G. MICHAEL, UNDER SECRETARY OF DEFENSE FOR RESEARCH AND ENGINEERING, DEPARTMENT OF DEFENSE CHIEF TECHNOLOGY OFFICER

Mr. Michael: Thank you, Chair Ernst and Ranking Member Slotkin and distinguished members of the Committee, when they get here. I am honored to be here along with esteemed colleagues, Dr. Janet Wolfson, Mr. David Tremper, and Mr. Chris Manning.

My mandate, as the Department's Chief Technology Officer, is the ensure delivery of tangible, decisive, and battlefield-ready technology to our military, and to do it at velocity and scale. The urgency stems from the hard truth that if we do not maintain a dominant technological advantage, American servicemembers will pay the price in combat.

The reality is heightened by the strategic environment we face. Our adversaries are investing heavily and moving with a purpose that surpasses key technology areas that will define the course of future conflicts, including AI, quantum, munitions production. However, we have strategic national assets that our adversaries do not. We have a dynamic innovation ecosystem comprised of unmatched talent and unlimited creativity and lots of capital markets that support those industries. My office remains focused on harnessing the full potential of our innovation ecosystem

to serve the American warfighter.

If you remember, after I was confirmed last May my first order of business was to restore focus on technologies that we need to maintain dominance on the battlefield. I inherited a list of 14 critical technology areas, which really did not prioritize anything. They were a laundry list that diluted our resources and inevitably slowed progress. Through rigorous data-driven analysis and in consultation with the military services and experts in the IC, I made the decision to pare that list down to six key areas. Those include applied artificial intelligence, biomanufacturing, contested logistics technologies, quantum and battlefield information dominance, scaled directed energy, which means cheap and proliferated, and scaled hypersonics, which also means cheap and proliferated.

The Department is focusing its investments, its talent, its leadership around these areas while the private sector crowds in capital to supercharge the process.

I want to be clear that the other technologies, such as space and microelectronics, remain important. R&E will continue to carry out our statutory mandate to provide rigorous oversight across the Department's R&D portfolios, and ensure attention, advocacy, and resources continue to be devoted to those areas.

As an example of this quick progress, we rolled out

GenAI.mil, which was the Department's first department-wide AI platform, which did not exist before, and in just a few months we have got 1.4 million of our 3 million members have used our GenAI tools, which is an incredible increase from the 80,000 before that.

But we are not limiting that deployment to unclassed networks alone, which was what GenAI.mil started as. We signed agreements with virtually all leading AI frontier models and infrastructure companies in the last few months to deploy their capabilities directly onto the Department's classified networks.

We are also bringing innovation to production acquisition of conventional weapons, enabling the return of mass effects through the employment of large numbers of less-exquisite weapon systems. From the deployment of the LUCAS drones, which we were able to try in theater and speed up the R&D process to make them a program of record, we have also signed deals with new entrants in the last week, with five new companies, to develop low-cost, containerized cruise missiles and low-cost hypersonic missiles. These are evidence of our openness to new industry, that will do fixed price, fixed cost, and fast delivery.

As I noted earlier in my remarks, the innovation ecosystem now has a unity of effort in the Department of

War. We have consolidated the Chief Digital and AI Office, DIU, DARPA, the Office of Strategic Capital, SCO, and TRMC under my leadership, and that gives us the ability to reduce duplication and increase effort on things we need to at the Department.

With that I will leave it to my colleagues.

[The prepared statement of Mr. Michael follows:]

Senator Ernst: Thank you very much. Mr. Manning, you are recognized for 5 minutes.

STATEMENT OF CHRIS MANNING, DEPUTY ASSISTANT SECRETARY OF THE ARMY FOR RESEARCH AND TECHNOLOGY

Mr. Manning: Thank you. Chairman Ernst, Ranking Member Slotkin, and distinguished members of the Subcommittee, thank you for the opportunity to testify today on the Army's innovation enterprise. It is an honor to represent the dedicated scientists, engineers, and acquisition professionals who work tirelessly to ensure that our soldiers remain the most lethal, protected, and technologically advanced land force in the world.

This is an exciting time for the Army, as we embark on a generational transformation of how we do business. The battlefield of today is hyperconnected, highly contested, and characterized by extremely rapid technology cycles. To dominate in this environment, the Army cannot rely solely on acquisition methods of the past. We must fundamentally transform how we discover, develop, and deliver capabilities to the tactical edge.

In coordination with the Department of War and our partners in Congress, the Army has undertaken a bold acquisition reform effort, aligning the systems of how we innovate, develop, and buy under Portfolio Acquisition Executives. This reform ensure that every dollar spent on our applied science and technology enterprise is deliberately synchronized with requirements generation,

development, and fielding. It allows us to get new overmatching capabilities out of research and into the hands of our soldiers more efficiently and effectively than ever before.

Last year, in coordination with Army leaders, we conducted a comprehensive review of the Army's science and technology program, identifying areas where the Army must keep or increase investments and areas where we should rely more on commercial sector innovation. As a result of this analysis we began to realign funding through reprogramming, and you can see the full effect of this rebalancing in our fiscal year 2027 budget request. We increased S&T investments in areas such as long-range fires, counter-C5ISRT, and counter-UAS. We plan to capitalize on heavy commercial industry investment in areas such as C3 and autonomy.

Overall, the Army's S&T budget request for fiscal year 2027 is $2.773 billion, about 11 percent above our fiscal year 2026 request.

The Army faces competing needs which we work thoughtfully to balance. We must provide our soldiers today with advanced capabilities to meet the current threats, without abandoning the long-term fundamental research necessary to maintain our advantage for the next century. Our fiscal year 2027 budget request acknowledges

this reality. You will see we made reductions to our basic research program, we increased our funding request for applied research S&T. We will remain committed to a robust level of fundamental science.

We have also continued to improve and expand the Army Research Risk Assessment Program. This effort safeguards taxpayer-funded research by ensuring Army investments flow to academic partners who are both scientifically credible and capable of maintaining secure research environments.

As we have seen over the course of multiple conflicts across the world, product development cycles can be measured in weeks and days, not years. To address the need for extreme agility, the Army shifted how we engage nontraditional defense contractors, startups, and commercial tech sector. We are taking the best practices in technology maturation in commercial industry and applying them to how we do business in the Army.

The newly launched Pathway for Innovation and Technology, or PIT, represents "innovation in the dirt" and operates under three guiding principles: speed is more important than perfection; early soldier iteration is critical; and we must validate the demand signal before we make large-scale investments.

The PIT ties together Army Service Component Commands, Army Corps, and Army Divisions, with the industry

engagement efforts of Army FUZE. With this construct, the PIT allows acquisition professionals to iterate directly with soldiers in the field, turning tactical demand signals into fielded prototypes in months rather than years or decades. While this new program is still working towards full operational capability, it is already starting to bear fruit.

Finally, on behalf of the entire Army S&T community I would like to express my appreciation for the critical support this Committee provides. We cannot succeed without you.

Thank you again for the opportunity to testify today. I look forward to your questions.

[The prepared statement of Mr. Manning follows:]

Senator Ernst: Thank you, Mr. Manning. Mr. Tremper, you are recognize for 5 minutes.

STATEMENT OF DAVE TREMPER, DEPUTY ASSISTANT SECRETARY OF THE NAVY FOR RESEARCH, DEVELOPMENT, TEST AND EVALUATION

Mr. Tremper: Chairwoman Ernst, Ranking Member Slotkin, thank you for the opportunity to appear before you today to address the state of the Department of the Navy's science and technology budget portfolio.

The Department of the Navy's S&T budget is essential to maintaining future naval power and national security amidst rapidly evolving global threats. The budget is aggressively focused on transitioning critical basic research into deliverable combat capabilities while ensuring a high return on investment through disciplined, relevant, and rapid technology development and integration.

The strategic landscape is transforming with relentless technological change and a new era of great power competition. Basic and applied research are instrumental in creating a scientific foundation for emerging naval concepts, technologies, and capabilities. Advanced technology development investments in future naval capabilities evolve that scientific research into new, transition-ready combat capabilities aligned with naval operational priorities while investments in innovative naval prototypes translate that research into revolutionary naval combat capabilities.

The DON has recently established the Department of the

Navy Rapid Capabilities Office as our single accountable organization for accelerating the fielding of critical solutions to the fleet within a 3-year time frame. The DONRCO is intended to "fail fast" and iterate quickly with industry to ensure capabilities are tested and refined in operationally and relevant environment. The DONRCO brings operational challenges directly to industry. This enables a parallel focus on new entrants and traditional primes to the defense industrial base but also harnesses American innovation more effectively to deliver the best possible solutions to our warfighters.

The DON is also actively supporting defense innovation ecosystems transformation efforts, spearheaded by Honorable Michael, in order to strengthen alignment across science, technology, research, and development organizations.

Relatedly, the Department of the Navy is working to improve internal alignment of the Naval Research and Development Establishment to best enable the new Program Acquisition Executives-centric acquisition enterprise strategy. Optimal alignment will ensure timely delivery of capability and operational support to the Fleet and Marine Corps while ensuring long-term health and stewardship of the NR&DE.

The NR&DE depends on world-class facilities to develop and deliver capabilities. This infrastructure has been

challenged by facilities that are exceedingly surpassing their traditional life expectancies with limited new investment due to other higher priority needs across the Department. I am thankful to Congress for recognizing this challenge and providing authorities that bring new and enhanced tools we can leverage.

I am furthermore supportive of the lines of effort established in the fiscal year 2027 Annual Five-Year Plan on Improvement of Department of Defense Innovation Infrastructure, that highlight additional opportunities to strengthen RDT&E labs and facilities.

An effective NR&DE enables successful transition of emerging science and technology from the laboratory into the hands of our sailors and marines. Key to that success is our ability to quickly translate scientific discoveries into and across naval operations, systems, and platforms. The Department of the Navy is proactively aligning our activities across acquisition reform, requirements reform, and innovation ecosystem reform to streamline capability deliver and empower PAEs with flexibility to integrate new technical solutions as those solutions emerge.

Critical to this accelerated capability delivery is a seasoned, technical workforce within our Warfare Centers which can shepherd S&T development within or outside the Department of War to deliver survivable and sustainable

capabilities within naval operational environments. The DON is working to optimize access to and operation of our Warfare Centers' engineering activities as a critical enabler for transition of innovative S&T and industry solutions into the hands of our warfighters.

These efforts reflect the "Acquisition Transformation Strategy Rebuilding the Arsenal of Freedom," as directed by executive orders and authorities granted in the fiscal year 2026 National Defense Authorization Act. The DON is proactively aligning our activities to realize this acquisition requirements and innovation ecosystem reform while promoting competition, incentivizing faster execution, taking calculated and shared risks, and leveraging new authorities to create acquisition flexibility to deliver the decisive capabilities our sailors and marines need to both win and ensure that we never fall behind.

Thank you for time, and I look forward to your questions.

[The prepared statement of Mr. Tremper follows:]

Senator Ernst: Thank you very much. And now, Dr. Wolfson, you are recognized for 5 minutes.

STATEMENT OF JANET C. WOLFSON, PhD, ASSOCIATE DEPUTY ASSISTANT SECRETARY OF THE AIR FORCE FOR TECHNOLOGY, ENGINEERING, AND PRODUCT SUPPORT

Ms. Wolfson: Thank you, Chair Ernst, Ranking Member Slotkin, and distinguished members of the Subcommittee, and thank you for the opportunity to testify today on the Air Force's fiscal year 2027 science and technology budget request. We are proud to represent the Air Force's science and technology enterprise, working in full alignment with Honorable Michael to ensure the United States military, and especially the United States Air Force, maintain a decisive and overwhelming advantage in any and every domain of warfare.

The Air Force Research Laboratory's mantra of "One Lab, Two Services" captures the integrated nature of our mission, supporting the critical air, space, and cybersecurity domains. Our fiscal year 2027 budget request is directly responsive to the Department's priorities, making increased investment in critical technology areas, and deconflicting our efforts across the services to focus on Air Force unique technology gaps. We are committed to delivering tangible, battlefield-ready results to our warfighters at velocity and scale.

To achieve this goal we continue to invest and prioritize in investing in decisive military capabilities.

Our fiscal year 2027 budget is focused on delivering the capabilities needed to deter conflict and decisively prevail in any battlefield scenario. The following investments represent some of our commitment to fielding those technologies that provide an advantage to the American warfighter.

First, as the top modernization priority for the Department, the Air Force is rapidly advancing offensive hypersonic strike capabilities and the layered defenses required to counter adversary systems. We are also focused on the materials and manufacturing advances needed to field those systems at scale, ensuring our warfighters have the tools to project power and hold any target at risk.

Another area is ensuring dominance in the air domain, and is increasingly reliant on resilient and high-performance energy solutions, such as advanced battery and energy storage. While the commercial sector continues to drive standard battery innovation, the Air Force is deliberately investing where industry will not, targeting the hard United States Air Force battery challenges inherent to extreme combat environments. We are prioritizing advanced specialized battery technologies to enhance the performance, endurance, and reliability of critical operational systems, from high-altitude, unmanned systems and platforms to forward-deployed expeditionary

equipment.

Investing in nuclear delivery science and technology is also paramount, as all Department of War operational plans depend on a credible and reliable and effective nuclear deterrent. The United States Air Force's nuclear delivery science and technology programs focus on developing and reestablishing the specialized expertise, infrastructure, and nuclear delivery system capabilities needed to modernize and mature the science and technologies that will enable the Air Force to operate in a peer-contested nuclear environment.

Finally, the ability to fly, fix, fight our most advanced platforms is paramount to maintaining air superiority. The Air Force is addressing the sustainment challenges for our fifth-generation fighter fleet across the entire platform, from canopies in airplanes to advanced engine components.

Crucially, we are optimizing fleet readiness by advancing non-destructive investigation capabilities. By investing in these technologies that improve reliability and reduce maintenance burdens, we ensure our most critical assets are ready to project power and defend our national interests.

We are also revitalizing the innovation ecosystem, accelerating the links between our organic science and

technology enterprise, the commercial industrial base, and our acquisition programs. These enhancements to our technology, transition, and innovation ecosystem are essential to our efforts to evolve our acquisition engine, which will enhance our ability to identify, evaluate, and recommend promising technologies for early adoption.

Every investment we make and every technology we accelerate is done with a single purpose -- to serve the American warfighter. We are building a modern arsenal of freedom, and our men and women in uniform deserve nothing less than the very best technology our nation can produce.

Distinguished members of the Subcommittee, thank you again for your engagement on these critical issues and for your steadfast support of our servicemembers and our technology. I look forward to answering any of your questions.

[The prepared statement of Ms. Wolfson follows:]

Senator Ernst: Thank you again to our witnesses. And we will start now with the rounds of questions and answers, and I will recognize myself for 5 minutes. And Secretary Michael, we will start with you. You had stated that biomanufacturing is one of the six critical technology areas that you had personally selected. In last year's NDAA Congress mandated the creation of the Biotechnology Management Office to ensure that the Department can catch up to China. And that was an important step, but a mandate, if we do not have that leadership prioritization, it really is just an organizational chart entry. So we really need to see this move forward.

Iowa State University, of course, my alma mater, is home to one of the Department's BioMADE pilot facilities, and it is scheduled to open in 2027, aligning with the Department's broader sprint timeline. And we really feel this is progress worth protecting.

But GAO has found that the Department plans to wind down two of its three major biomanufacturing initiatives by fiscal year 2027 and fiscal year 2028, and the congressionally mandated biotechnology roadmap is not expected until later this year.

So, Under Secretary, how will you ensure the Biotechnology Management Office becomes a genuine priority, and how does the Department plan to sustain momentum in

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biomanufacturing beyond those program end dates?

Mr. Michael: Thank you, Senator. We have recently announced a leader for the Biotechnology Office, reporting directly to the Deputy Secretary. We have drafted the charter. We have shared it with, I believe, your staff, so that we can get comments from Congress and do we think that we have the right legislative intent embedded into the charter. We also have the critical technology area and my group that will support that Biotechnology Office, so we think we are putting more resources into this and not making it just an organizational checkbox.

In terms of checking on the two facilities, I will have to get back to you on that. I do not have the answer off the top of my head why those decisions were made. But we take this very seriously. I believe it is a threat, vis-à-vis the progress that China is making on some of these technologies, and that is why it is one of my critical technology areas.

Senator Ernst: And I thank you for that because when we talk about emerging threats and capabilities we do not often talk in the bio space. It is really important that we do so, because if we are not engaging, China is just going to get that much further ahead. So I appreciate that and look forward to continuing to work with you on that area.

We have also seen, for more than a decade, with the Department of War that there seems to be an incessant ability of senior leaders to really ignore the importance of infrastructure, and it is especially true when it comes to our labs. Yet the Department's only idea for fixing this is to raise the unspecified minor military construction threshold, and this is troubling considering the needs within the Department are hundreds of millions of dollars to modernize that infrastructure.

So for all of our witnesses, why do you think the Department is failing to program for lab infrastructure? Is it competing requirements? Maybe just please go into that, and Dr. Wolfson, we will start at your end of the table and work our way across. And I have a minute and a half remaining, so if you could be brief.

Ms. Wolfson: Excellent. I think the challenge really is the prioritization of near-term needs versus long-term prospects. A lot of the lab infrastructure is not for this fight but for the next fight or the fight after that, which becomes challenging. The advancement to Minor Milcon is actually a huge step forward, that allows us to use our FLEX-4 funding for up to $15 million. And many lab buildings and technology can be invested with those little bits of sums. In fact, for AFRL we have $136 million that we have allocated for FLEX-4 for next year that we could

utilize that additional ceiling for.

Senator Ernst: Okay. Thank you. Mr. Tremper.

Mr. Tremper: I will also double down on what Dr. Wolfson just pointed out. The FLEX-4 funding has been critical for us investing in our infrastructure. And I will also completely agree that operational capabilities today and milcon needs today, in addition to barracks and families and child care, are outweighing our long-term S&T investments in infrastructure. So we find ourselves behind, but extremely appreciative of those authorities that we are getting through FLEX-4, and even Section 233 has allowed us to start investing in our infrastructure.

Senator Ernst: Thank you. Mr. Manning?

Mr. Manning: For the Army it is similar. It is prioritization regarding barracks, family housing, daycare, and then where do we get to labs. And I will echo Section 4123, that FLEX-4 has been extremely helpful. We appreciate Congress providing that ability for us to improve our facilities.

Senator Ernst: And any additional thoughts, Secretary?

Mr. Michael: I will just say that in the recent NDAA Congress was kind enough to give our office the ability to do some oversight, so that allows us to work in tandem, to look collectively at where we can get efficiencies with the

spend that we need to make to upgrade to labs from the state that they are in, which is not great.

Senator Ernst: Okay. Thank you. I appreciate the feedback. Senator Slotkin.

Senator Slotkin: Thank you. Thank you all for being here. You know, I think that if our politics were healthy, this body would be dealing with AI and the coming impacts of AI every week. We would be having some conversation about the economic impacts, the military impacts, the intelligence impacts. Just the way that it is going to change our country, I think, merits real conversation. And there is an opportunity cost for us being up here, fighting about the daily issues. We are missing some of the big strategic moves.

And Secretary Michael, can you help us understand, and kind of in English for the public since we are in public, why is it important to win the classified AI race against China? What would happen if China beat us to the punch? Can you put that into words for us?

Mr. Michael: Yeah. I will start with the national security implications and then maybe some of the economic implications. But from a national security standpoint, this is another case of our main adversary, China, taking our IP from our American-developed labs, that have spent hundreds of billions of dollars by the end of the next

couple of years, between the cloud layer and the AI company layer, and they are, quote/unquote, "distilling" those models, which means effectively copying them for a fraction of the price, taking off the guardrails for them, which means they could be used in ways that they are not intended to be used, which is very dangerous for us, whether it is as a cyber weapon, as a biological weapon, as a chemical weapon. And when they can take those guardrails off and point essentially that AI against us, that is a very dangerous imbalance that I worry about a lot.

And when it comes to using AI to develop new weapon systems, they have a culture which permits, or they can direct the government, the Chinese Communist Party can direct their AI industry to build whatever they want. We have to get on a better page with our domestic partners in the AI industry to make sure that we are developing unique capabilities when it comes to physics, aerodynamics, material science, all of the things that could go into making our defensive systems more lethal, more accurate, and so on.

And then the last piece is from an intelligence standpoint they are willing to use AI, from an intelligence standpoint, in a way that we have not contemplated yet. And that gives them greater insight. We have seen intrusions from Salt Typhoon into our phone networks, into

individual phones, into our systems, and that could be sped up by AI and made more intrusive.

So the threat is real that we have to stay ahead of our adversaries in every dimension of AI, and that is part of why I believe the AI action plan to make AI American companies stronger is really important.

Senator Slotkin: Yeah. I mean, I think this is the problem when we are dealing with an adversary who does not have the rules that we so desperately believe in, in a democracy, and are trying to preserve. But how am I supposed to square, you know, we want to beat the Chinese to the punch but they do not have any guardrails and we need guardrails. It is a conundrum, but I introduced a piece of legislation on AI guardrails for the military, not to unduly stifle development but just to say that we should have a human being in the conversation when we are making decisions of life and death. We should not launch nuclear weapons without a human being making that decision, and we should not have domestic surveillance, all things that the Chinese could decide to do tomorrow.

So help me square how we keep our sort of values as a nation but still win this race?

Mr. Michael: So we have to stay ahead on chips, power, innovation, and capital formation, and that gives us this 6- to 12-month lead, and maybe we could extend it. In

the last Commerce NIST evaluation our lead had increased by a few months against the Chinese. And part of the reason for that is to try to prevent this IP theft that is happening. That is a big deal. This distillation attack thing is a real problem, and we have coordinated, as an Administration, with all the labs to try to help them prevent these distillation attacks.

We also have to help them prevent operational security mishaps. There are a lot of foreign nationals that work at American AI companies that we have to be concerned about and have to help them secure their own networks on. And we have to work with them also on ensuring that the way that there is a flow between researchers from our country to theirs does not sort of release the secrets that we do not want done.

But it is going to be an ongoing challenge. There is no one solution to this.

Senator Slotkin: Yeah. I will have more to say but I yield back, and my time is up.

Senator Ernst: Thank you. Senator Shaheen.

Senator Shaheen: Thank you, Madam Chair, and thank you all for being here. Under Secretary Michael, the Cross-Functional Team for Anomalous Health Incidents is now under your portfolio, and as we have discussed before the full Committee, many of us who have followed the AHI issue

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over the past, really, more than 6 years now have had concerns that the shift places more of a technical focus on an issue that really deals with not just care coordination but intelligence, attribution research, heavy coordination with the interagency, especially at a time when I understand there is breakthrough research related to attribution. And I was really surprised, I have to admit, to see that the budget request nearly triples the amount we have seen in past years for the Cross-Functional Team.

So can you give us a little more detail about where you hope the focus of this funding will be and what you are hoping to accomplish?

Mr. Michael: I think the right place for this effort is in research and engineering, because diagnosis and treatment for the victims is priority one. Priority two is attribution, and then three is policy. And we have to get the first part right to be able to do two and three. We can walk and chew gum at the same time. So our interagency collaboration has only increased since it has gotten to my team. We have gotten the first major increase in collaboration from the IC on this. And we have also followed congressional guidance for the first time where we have a two-star Navy SEAL M.D. as the military deputy on AHI, so we have staffed it up with some of the best and brightest minds.

The budget increase is so that we can do more of the real-world testing, because we believe that if we can confirm the science that has preliminarily been confirmed over the last few years, we could develop countermeasures, we can do the treatments better, our databases will be stronger, and we will know how to teach the doctors at Walter Reed how to diagnose and treat better.

So I think all those things are all good news stories for where this is now, and that is why you see the budget increase request.

Senator Shaheen: Well, I look forward to the briefing tomorrow and to hearing more about what you are doing. That is encouraging, and hopefully will answer some of the questions that we have.

Mr. Michael: I think you will be pleased by the briefing.

Senator Shaheen: Thank you. I want to also go the SBIR program, something that is near and dear to us in New Hampshire because former Senator Rudman introduced and passed that legislation, and it really came from some of the innovation that was being done by small businesses in our state, back in the '80s. And it has been a critical tool.

But there have been some changes that have mandated that agencies implement a cap on the number of proposals

that a company can submit. I understand that Deputy Under Secretary Mazol -- am I pronouncing the name correctly? -- told the Ranking Member of the Small Business Committee that the cap would be implemented on a per-topic basis. Is that your understanding, as well?

Mr. Michael: Yes. It is on a per-topic basis so that, you know, we thought the total cap on any entity was different than capping on a per-topic basis, which had some benefits in reducing some of the abuse of the system, but gave everyone an opportunity to participate.

Senator Shaheen: Great. I probably could have asked the Chairwoman that question, as well, since she chairs the Small Business Committee. But I am glad to hear that that is the way it is being interpreted.

My final question is really both for you, Under Secretary Michael, and for Dr. Wolfson, and it has to do with PFAS destruction technology, because as you know, these have been really numerous at U.S. military compounds. In Portsmouth, the former Pease Air Force Base was one of the first bases in the country to show PFAS in significant amounts in the groundwater in ways that affected children, in particular. And there was a provision in last year's NDAA to authorize the use of new destruction technologies.

So can you give us an update on what the Department is thinking in terms of PFAS destruction and disposal, and Mr.

Dr. Wolfson, I will ask you to go first.

Ms. Wolfson: That is an excellent question and not in my area of expertise, so I will take that as a QFR and get back to you with that answer.

Senator Shaheen: Then I will ask Under Secretary Michael if he can respond to that.

Mr. Michael: I am sadly in the same position. I will have to owe you an answer on that, ma'am.

Senator Shaheen: Okay. Well, I look forward to having those answers to the Subcommittee. Thank you both.

Senator Ernst: Yeah, thank you, and I do want to recognize Secretary Michael, as well, providing feedback for the SBIR/STTR reauthorization. And we really saw the Department respond very quickly after the reauthorization, and there were over 90 topics that were brought forward by the departments for competition. So thank you very much for that.

Now I recognize Ranking Member Reed.

Senator Reed: Well, thank you very much, Madam Chair, and I have got three basic questions I would like to address to all of you. One, you are talking about your priorities, but I do not think you put in your fiscal year 2027 budget request for the record, and that would be useful. So if you could tell us what your budget requests are and a comparison with last year. Are you up? Are you

down? And also some of the areas where there are major funding increases and decreases. So Secretary Michael, and run down the list, please.

Mr. Michael: It has been a confusing year for budget requests given how the budgets have gone. I think you can resonate with that, Ranking Member. But we submitted ours to our leadership at the Department of War, so we have done all the work at least at the component level. I do not know if it is with OMB now, but at a high level on the RDT&E side, defense-wide from my office, we asked for about a $1 billion increase from last year, at the core RDT&E level. And that is to fund certain programs in hypersonics and some of the key areas in the critical technology areas.

Separate from that you will see two big requests on compute power, which we need for the AI arsenal, essentially, that we need to build, and for an autonomous warfare group, where we are going to really coordinate our autonomous, which includes drones, counter-drones, and all the things that we need to fight sort of the next war, not the last war.

Senator Reed: And those requests are going to be honored?

Mr. Michael: They are going to be what, sir?

Senator Reed: They are going to be recognized by OMB and included?

Mr. Michael: Yes. Yes.

Senator Reed: Good. Mr. Manning, please.

Mr. Manning: Thank you, Senator. I will start with fiscal year 2026. In fiscal year 2026, the Army requested $2.48 billion for Army S&T. Our fiscal year 2027 request we submitted is $2.773 billion, so about an 11 percent increase.

I do want to note that Congress enacted over $4 billion in 2026 for S&T, so we thank Congress for the bipartisan support to Army S&T.

Senator Reed: But you are confident you are going to get that 11 percent increase?

Mr. Manning: Yes. That is what we have submitted in the budget.

Senator Reed: And then where are the big plus-ups and the big decreases?

Mr. Manning: Yeah. The big increases were in long-range fires, counter-UAS, and counter-C5ISRT. Areas where we took risk and intend to leverage commercial investments are C3 and autonomy.

Senator Reed: Mr. Tremper, please.

Mr. Tremper: Yes. For the Navy, in fiscal year 2026 our requested was $2.55 billion. In fiscal year 2027 our request was $2.408 billion, so approximately a 5 percent decrease. Part of that included a realignment of 6.3 money

into 6.4, so when I talk about S&T I am talking about 6.1 through 6.3. There was some realignment of 6.3 investment, which was more appropriately aligned to 6.4, so that was removed.

There is a significant emphasis right now in that integration space, so that word "integration" becomes extraordinarily important for taking S&T and putting it into the hands of the warfighter. So you start to see budget adjustments that are happening between the 6.1 to 6.3, and then emphasis happening into the 6.4, which is where we do our prototyping and we get it into the hands of the operators.

So the enacted for fiscal year 2026 was $3.299 billion, so significantly more than we requested, and we greatly appreciated those adds, that we benefit from that.

Our FIDA profile for our VA 1 through 3 has been pretty consistent within that 10 percent time frame. But really we are seeing a significant increase in the integration space on how do you take it from the lab to the warfighter.

Senator Reed: Right. So that is lab, warfighter, and command and communication, C2 and 3.

Mr. Manning: Yes.

Senator Reed: Okay. Dr. Wolfson, please.

Ms. Wolfson: Yes. So for the United States Air

Force, and again I am only speaking for the United States Air Force -- if you want the answer for the Space Force we can take it as a QFR and bring it back for you -- our fiscal year 2026 presidential budget was $2.534 billion, and for fiscal year 2027 our request is $2.78 billion. So we have gone up. We are focusing significant increases in hypersonics. We left our directed energy line where it has been, and we took some near-term risk in biomanufacturing and autonomous AI for collaborative platforms.

We are also, though, very grateful for the $830 million in congressional interest items to support the S&T community, and thank you very much for that.

Senator Reed: And I finally recall the Air Force as the U.S. Army Air Corps, but forgive me. Thank you.

Senator Ernst: Thank you for joining us, Ranking Member. We will go ahead and do another round, and I just want to double back on the labs for just a moment. If each one of you could share maybe what is your number one unfunded priority when it comes to our lab infrastructure. Secretary Michael, if you have input, please, first.

Mr. Michael: I mean, most of the lab infrastructure spend is going to come from the services, so I think it would be worthwhile to start with them.

Senator Ernst: Mr. Manning, for the Army? Thank you.

Mr. Manning: Thank you, Senator. Each year we submit

our Section 2806 report of our unfunded lab infrastructure. I would go to that and go to the top of our list. I do not have that with me specifically here. I would be happy to take the question for the record on that.

Senator Ernst: Okay. Thank you. Mr. Tremper?

Mr. Tremper: Yeah, so for our unfunded priority list our number one is a reconfigurable cybersecurity lab at NIWC Pacific to address cybersecurity concerns. However, equally important to that is our number two, which is an electromagnetic and cyber countermeasure lab at the Naval Research Lab to support our counter-C5ISRT investments as spectrum electronic warfare sensing are key priorities within our S&T strategy going forward.

Senator Ernst: Okay. Wonderful. Dr. Wolfson. Thank you.

Ms. Wolfson: For the Air Force we were lucky enough to make it onto our unfunded priority list, we had number 11, and it is a human performance S&T lab on the DAF priority list. However, I will also reinforce what Mr. Manning said. All the rest of our infrastructure that did not make this list is listed in that same report that we provide to Congress every year.

Senator Ernst: Thank you very much. We will go back to AI and autonomous systems. I think this is something that is really important to both the Ranking Member and I.

But we do know that the Department has been making major strides when it comes to AI and autonomous warfare, and I think largely in part not just this Subcommittee but the entire Committee really supports the direction that we are heading. But as we are seeing the programs scale then the policy, just as Senator Slotkin has pointed out, the policy architecture really has to scale with it, and this is where we probably lag behind.

The Department is requesting a massive increase for DAWG. For those in the audience that may not know, it is the Defense Autonomous Warfare Group. And it is going from the $225 million up to the $55 billion mark for fiscal year 2027. And at the same time we are integrating the AI-driven target with those autonomous munitions at a pace that DoD Directive 3000.09 was not designed to contemplate.

So Secretary Michael, has the Department formally reviewed whether the current governance framework is actually keeping pace with DAWG's growth, and then how do we overcome that if not?

Mr. Michael: I think we have to evolve that, and I think the policy part of DoW takes the lead in amending or updating 3000.09 and will be part of that. But it absolutely needs updating, not only because of the capability potential increase but because of the threat environment, what is possible by the adversary. And partly

because of the lessons we learned in Iran, we want autonomous mine-seeking capabilities. We want autonomous mine defeat alternatives. Golden Dome has an autonomous element to it, a space-based interceptor, to hopefully get a Chinese hypersonic missile in the first 90 seconds of launch before it separates into decoys and multiple munitions.

So there are going to be different risk levels with autonomous, and we have to account for them in our policies, and my belief is that will change more frequently than it has in the past and it ought to. It has to be consistent with our values, consistent with the threat environment, and consistent with the technology development.

Senator Ernst: Yeah, thank you. I absolutely agree with that. We understand the urgency. We want to provide proper oversight of that. We do not want it to be taken as opposition to obtaining our goals. But we also understand that China and Russia, they have few less governance issues when it comes to autonomous systems and AI than we do. But we still do want to align to our values.

So I really appreciate that discussion and I will yield my time, and we will go next to the Ranking Member.

Senator Slotkin: Thank you. I mean, I think what you are hearing is that there are a lot of questions about how

this governance should be done, and I am just keenly aware that unlike the nuclear race, right, who can get to a nuclear weapon first, the Oppenheimer story, where that research and all that funding and all that support and that development that went on in the middle of the desert to get us to a nuclear weapon was paid for by the U.S. government, sponsored by the U.S. government, not a private sector company.

And fast forward to today, the private sector is really where the just powerful innovation is happening, and I think it puts even more onus on all of us to have that conversation, separate from each company, on what the governance should be for AI. And I do not believe that a private sector company should get to decide what the rules are, but I have got to be honest, I think it is part of our congressional role up here to provide left and right limits that provide some guidelines for how we govern this very new technology.

And just like Congress did in the nuclear age, it was not like we just said, "Hey, private sector, go bonkers. We now discovered nuclear energy and nuclear weapons. No oversight needed from Congress. Let us know how it works out." It was given that it had the potential for life and death. It had real oversight from this body, with input from everybody. But I feel very strongly.

And I think also in that time, right, it is not like before we started the arms control conversation, I trusted that the Soviet Union would always do the right thing with nukes. Of course they were willing to do things that we were not willing to do, but I am not willing to sacrifice our values with this next generation of technology and just say, well, the Chinese are going to do bad things towards us so we should say no rules. And I was very glad to hear, actually, that President Trump and Xi Jinping actually did seem to talk about some sort of guardrails on AI, even generally, at the summit.

But I just want to go back, Under Secretary Michael, to your comments and the importance of winning the race, because again, I think there is also bipartisan support for winning the race, and how important it is to get there first, and your concerns about the Chinese and distillation, and kind of stealing our AI models or learning.

So you have laid out how important it is to win. You have laid out how they are stealing. Given the strategic importance of winning I cannot, for the life of me, understand two decisions that have been made. Number one, the decision to sell Nvidia chips to the Chinese, giving them not our most sophisticated but some of our most sophisticated chips, and chips they do not have. And then,

secondly, I do not understanding picking a fight with one of the few companies, Anthropic, that is in all of your systems, all of you use Anthropic right now, to the point where we have named them a supply chain risk, and all of you are supposed to be divesting from Anthropic in the next 2 months.

Help me understand, given what you said about IP theft, why we are selling them some of our most sophisticated chips, and why we are kicking out one of the top three AI companies from all of your classified systems.

Mr. Michael: Yeah, so on the chips question, there is a debate within the technology industry which is if you sell an adversary older chips do you slow down their domestic production of equivalent chips because they become reliant on your technology -- that is one theory -- and then the programming language on those chips, did the developers, which are really important in AI because they develop on top of these chips and on top of these technology stacks, if they become used to the American stack is that net better for the American AI proliferation? And that is a debate, and the White House has decided that if we gave them two versions behind chips that we would be able to preserve our dominance on the programming language and make it less encouraging of them to develop their own domestic chip industry to catch up.

Senator Slotkin: But do you have any evidence, based on what you said a minute ago about their theft, their rampant theft of IP, their rampant ability and desire to work backwards from our technology, from cars to drones to chips to whatever, what evidence do you have that giving them this technology gets them addicted, rather than they just steal it and reverse engineer it for their own purposes?

Mr. Michael: Well, reverse engineering in this particular category of chips is no possible given sort of the steps in the chain. You have TSMC, the chip manufacturer, you have the lithography machines. There is a whole chain of things that they would have to do to be able to reverse engineer and replicate that.

That being said, I think the number of chips also matters. If you think about what one data center in the U.S. has, the biggest one, it has 250,000 chips in one data center, the kind of chip numbers that we were talking about in total for export for a country that is four times our size in terms of population was less than that in one data center. So this is not a sort of broad hey, go celebrate to anyone at any time.

And numbers matter in this race. As you said before, the amount of electricity, the number of chips, how many data centers we have, are they interconnected, and does the

data flow in the right way to them.

So I think that this could be that we are making too much maybe of this one sort of fig leaf, as it was. But if you are open I will go to the second question.

Senator Slotkin: I am over time here. Maybe we can come back to it, and we will come back to Anthropic.

Mr. Michael: Okay.

Senator Slotkin: Thanks.

Senator Ernst: Yeah, thank you. Senator Peters, you are recognized.

Senator Peters: Thank you, Madam Chair. Actually, I will probably come back to that question so in my time you will able to answer some of Senator Slotkin.

But I want to talk primarily right now about our need to deal with drones and swarms. We had a discussion about some of this in my office. But probably one of the key areas is deploying the directed energy weapons is probably the way you are going to be able to deal with this. So if you could just tell the Committee a little bit how you plan to mass produce directed energy in this field. You know, you can have drone versus drone warfare, other kinds of countermeasures, but at least what I have been seeing, and in tests, is directed energy is going to be probably the major way in which we can deal with these weapons.

So how do we accelerate that? I think we are way

behind right now. How do we catch up and make up for lost ground?

Mr. Michael: I think a few things that we are doing, and remember, scaled direct energy is one of my top critical technology areas, so it is a focus by us.

The science for directed energy is largely done, and now we are in the engineering phase of it. So the engineering part of it makes it cheaper, smaller, and more proliferated. And we now have a suite of directed energy products that go from low end to high end, and now we have to scale production of those.

The things that are helping that are Golden Dome, because they have a big reliance on directed energy. Certainly our experience in Iran has also doubled our interest in these systems. Same thing with high-powered microwave, although it has a different sort of mechanism of action than lasers. But we have also developed Joint Interagency Task Force 401 to collate all these different technologies so that we have bigger demand signals, which encourages industry to produce more and we get scale economies on that.

Senator Peters: But let me jump in. The DoD has set a timeline of 36 months for accelerating this. That is like light years compared to what we have seen in the past. What is different? How are we going to hit that?

Hopefully we will do it even shorter than that, but what are we actually doing different?

Mr. Michael: So a lot of the money allocated to Golden Dome is going to go to the fundamental engineering of these systems so that we can make them cheaper, smaller, and more proliferated. So that is a big change. And because the commitment was made to the President that we are going to have a demonstration that includes directed energy in our Golden Dome architecture, there is a lot of energy going into that.

Senator Peters: When do you expect that to be?

Mr. Michael: Well, we are going to have multiple demonstrations. The primary demonstration, where it demonstrates a lot of capabilities, will be summer of 2028.

So we have a whole team on this. There has never been more effort in the Department on this particular capability. There are several companies that are emerging that have developed it, and several companies that are taking what they have already built and making it cheaper and better.

Senator Peters: Okay. Then I am going to follow up on Senator Slotkin's question, because we have talked about this in the office, as well. We have to have access to all of these frontier models. We know with Mythos now, and Ethos coming out, was a game-changer in so many ways. But

that is not going to be the last big one that comes out. There are going to be others that are going to come out. How do you take certain companies off the table? We need everybody on the table, everybody engaged. We should not be calling some companies a security risk and supply chain risk when they are the actual leaders in the world. We should be figuring out ways to make sure that we are working closely with them.

I have a lot of questions about it, and we talked about it in the office, a lot of questions about how that happened. But give us some assurance that we are going to be making sure that our cyber warriors have the absolute best tools to take advantage of all the amazing American companies that are coming up with incredible new technologies.

Mr. Michael: Yes. Well, seven out of eight companies we have signed up with, before I got in this seat I had the responsibility, we had one partnership with one company. Now we have got seven partnerships, including open source models, which are another vector that are very important, that are not closed source. And all of them have agreed to the DoW terms, which are all lawful use cases, only one has not.

And just to be specific, like I was in your office, for the other members here, the things that we currently

cannot do under the contract with that company that we declared a supply chain risk, we are prohibited from doing battlefield management applications, prohibited from doing weapons development, prohibited from directing interceptions, like the Golden Dome scenario I gave you, prohibited from targeting military infrastructure even of an adversary in a conflict.

Those terms do not work for the warfighter, so maybe the technology is good, but if the terms of use do not match and they could shut the system off if it is used in a way that they do not like, that becomes a nonviable product for the warfighter. And that is why I went out and made sure that OpenAI, SpaceX, Microsoft, AWS, Nvidia, and Reflection AI are all partners in DoD on classified networks, so we have the best of all worlds.

Senator Peters: I would like to follow up because you mentioned areas there that have not been out there in public as to what those limitations are.

Mr. Michael: Yeah, we discussed it in your office, and we are working through how we can get you -- there are some NDAs between defenders on that contract that I am reading from, these terms, so if there is a way to do that we would like for you to be able to see in black and white those contracts.

Senator Peters: I definitely want to see that. Is

that something we can do?

Mr. Michael: Yeah, I believe it is something we can do. We have to work with our OGC on that.

Senator Peters: When will I be able to see it?

Mr. Michael: I was trying to get it to you. We have to go through some legal processes, but I think we can do that as soon as possible.

Senator Peters: I have a public commitment now, so that is great. I appreciate that.

Mr. Michael: It is a public commitment from me. I will run it by orders, but yes, I want you to see it. Anthropic could give permission at any time to let you see it.

Senator Peters: Okay. We will talk. Thank you. Thank you, Madam Chair.

Senator Ernst: Okay. And we will just do one final round? Okay. I will double back on SBIR again. I want to thank you. I am glad we were able to that over the finish line. I did spend a considerable amount of time on reauthorizing the SBIR and STTR, and I really do appreciate the Department moving quickly once those programs came back online in April.

We want to be able to transition the best of the best technologies to the warfighter, as quickly as possible. That has long been my priority. And it is why we have now

the creation of the Strategic Breakthrough Awards, so that we can rapidly scale the best technologies with buy-in from our acquisition officials. And DAWG and the broader autonomous systems enterprise rely heavily on these nontraditional commercial vendors for the software and the hardware that will define the future warfighting edge. And those are often the exact companies that really need a little additional help with their runway, to get it to the warfighter.

So Under Secretary Michael, what are we doing to ensure that the transition pathway from that prototype to actual production is actually functioning, and then how can we better measure whether the SBIR reauthorization is meaningfully improving this process?

Mr. Michael: Yeah. Part of the insight that we had about unifying the innovation ecosystem was to have a place everywhere in the lifecycle of a company, starting with SBIR/STTR all the way through program of record. And that gives me some visibility, if something comes out of SBIR/STTR then maybe it could get to DIU, Defense Innovation Unit, then maybe APFIT, then the Office of Strategic Capital, and then we could do testing and evaluation so that it can leap to the services without big gaps in time, the Valley of Death. So I now have visibility into all those sort of organizations and can

ensure that I am tracking a company all the way through.

A good example of a SBIR/STTR company that has made it all the way through now is Castelion. They were a SBIR/STTR company. Now they are developing low-cost hypersonics, less than half a million per missile, relative to the $50 million per missile we pay today. And those are good stories, so getting those stories out there and making sure that the services and each of these other funding sources that now I have some oversight on can see and take those weapons forward are really, I think, going to compress this notion of Valley of Death and hopefully eliminate it.

Senator Ernst: Wonderful. Any other input from the other members today? Dr. Wolfson?

Ms. Wolfson: Yes, please. I just want to say how grateful and thankful we are for the additional funding that you added in the new SBBR Authorization Act. We have actually some of that similar authority through our STRATFI process, which is SBIR funding, program of record funding, and then venture capital funding. And we have had that going for a while, and I just wanted to tell you a couple of the big successes that reinforce what Honorable Michael was saying.

Anduril was one of our first organization that utilized STRATFIs. They have since bought out another

company that utilized STRATFIs called Blue Force Technology, and their current evaluation is about $61 billion. Shield AI started as an AFRL STRATFI, that helps develop our autonomy for collaborative combative platforms. They are about $12 billion now. And then also Castelion was one of our AFRL Air Force STRATFIs, as well. It is doing great things.

So we are grateful for that capability and hope to continue to leverage it.

Senator Ernst: Thank you very much. Mr. Tremper.

Mr. Tremper: Yeah. In fact, during your opening statements you both alluded to relationships with industry and how do we foster those and how do we do things faster. One of the big Navy commitments is in that integration space, and we look at our Warfare Centers distributed across the country as our seasoned experts on how do you operationalize things. If I have a technology that shows up that is an SBIR Phase I, Phase II, how do I then take that and make it operationally useful? How do I bring it into that Phase III? How do I then measure success of my Phase III non-SBIR investments versus my Phase I and Phase II? And what we are seeing is about a two-to-one return on investment, so 200 percent increase in Phase III over what we invested in Phase I.

That integration space is key, though. For things

like Castelion the ability of those vendors to get access to ranges, to get access to engineering expertise within the government through CRADAs, through commercial services agreements, allows them to understand the operational context of the technology they are bringing their technology into. And now you can weave in the survivability and sustainability that then streamlines the scalability through acquisition.

So we are seeing a lot of success in those areas, in, in fact, to the lab infrastructure point, the commercial services agreements, where a VC-backed company is then creating an agreement with the government, allows them to pay to use the infrastructure of the government, which then gets put back into the government infrastructure. That is not government resources paying government infrastructure. That is VC resources being returned back into government infrastructure. So there are a lot of those public-private partnership arrangements that we are seeing a lot of benefit from, SBIRs VC-backed in terms of offering our engineering expertise to outside vendors.

Senator Ernst: That is fantastic. Mr. Manning, anything briefly?

Mr. Manning: Yes. We also recognize the importance of taking these small companies and getting them on a path to scale. And prior to our most recent acquisition reform

we launched a SBIR Catalyst Program. Part of that was small business partnered with a larger integrator, connected with, at the time, program executive office money. So resources in all three, everyone having skin in the game right at the beginning to go, hey, this is panning out, how do we take it to scale.

More recently, with act reform, we have aligned our SBIR program with Army FUZE, connected to the PIT. So we anticipate having those small businesses going and iterating with soldiers at 18th Airborne Corps, and when we see promising technology, the PIT director connecting with our portfolio acquisition executives to go how do we get this on a path to rapidly take it to scale.

Senator Ernst: Thank you. Okay, Ranking Member.

Senator Slotkin: Thanks. Under Secretary Michael, just to continue our line of conversation. You know, again, with a strong desire to win the AI race it is hard to rationalize, in my brain, the two decisions of agreeing to sell some of our most sophisticated chips, Nvidia chips, to the Chinese, and then, secondly, picking a fight with Anthropic. And I know you have touched both of this.

But let me just ask on Anthropic as a follow-up, and for others on the panel, so this fight erupts between Secretary Hegseth and Anthropic. It somehow cannot be worked out, even though all of you up here use Anthropic in

your classified systems. We have declared them a supply chain risk, and you have been told by, I believe, August to wean yourself off and extricate them from your systems.

Then they drop the detail that they have invented this thing called Mythos, which is going to take us light years ahead on cyber threats, in particular. And it is such a leap that they are actually testing this commercial product like a weapon. They are giving it to private sector companies, and I understand they are giving it to you all to test and try before they put it out on the open market, because they are so worried about the vulnerabilities it will expose and the attendant national security risks that come from that.

Who knows the next thing they are going to invent, but the Department of Defense apparently will not have access to it.

So separate from Under Secretary Michael, for the three others representing the services, are you currently using Anthropic in your classified systems today, and what is the cost both in terms of capacity and money, since this is a budget hearing, in pulling that out of your systems by the August deadline, if you intend to meet those? Let's start with Mr. Manning.

Mr. Manning: Senator, I am aware that we are using some Anthropic. We are in the process of assessing where

all that is so that we can be in compliance with the direction from Department of War. I would have to take a question for the record as to what the cost is associated with that.

Senator Slotkin: Yeah, I would appreciate that, if that is going to be the answer that all of you are going to have to say, I will hold you to it, because this is a budget hearing. You are asking us for money, and decisions that the Secretary of Defense has made is going to cost the American taxpayer and your budgets money. I would like to know what that cost is.

And for the rest of you, are you currently using Anthropic in your classified systems, and are you going to meet the timeline to extricate it from your systems, and at what cost?

Mr. Tremper: Yeah, the Navy is also in that 180-day assessment period. I cannot confirm current use of Anthropic in our classified systems, but will be happy to come back and provide that information.

Ms. Wolfson: Same answer. We are still within that 180-day period. We are identifying it. Once we have identified where that is we will understand what the cost of some of those challenges are.

Senator Slotkin: Okay. So I will circle back with you all and expect to get that. I would like to get that

in a timely fashion. If you are asking us for money, it is budget season, and we are going to mark up the NDAA, then you can get me your answers on what you are going to cost the taxpayer.

And lastly, Under Secretary Michael, I would just say, what is complicated is that many of us, again, both sides of the aisle desperately want to win the AI race against China. But it just feels like story after story around corruption, every single week. And the story that came out this week is that the President traded $5 million worth of Nvidia stock a week before he allowed the Department of Commerce to say that we could sell those chips. Those kinds of things speak to the perception of impropriety. I cannot prove guilt or innocence, but the perception. And I know you got into it on the HASC side with folks over there.

Can you just confirm for me, separate from paperwork and when you sign different things, because we have had this discussion before, have you made money in your portfolio on AI stocks since taking a job with the Federal Government, where you are in charge of AI?

Mr. Manning: I recused myself from any company that I had a holding in.

Senator Slotkin: But have you made money? By all accounts you have made significant amount of money. It is

public.

Mr. Michael: I made money because I had to divest of all the stocks that I might have had a conflict in. When you sell them --

Senator Slotkin: You sold all your stock?

Mr. Michael: All my conflicting stock. And for those that the OGE said you can keep them, you just have to recuse, I followed that faithfully.

Senator Slotkin: So do you have any AI stock in your portfolio right now?

Mr. Michael: I do not.

Senator Slotkin: Thank you. I yield back.

Senator Ernst: Thank you. I recognize Senator Kelly.

Senator Kelly: Thank you, Madam Chair. Mr. Michael, under Title X U.S. Code Section 3252, the statute that your Department invoked against Anthropic as a supply chain risk, it is defined as the risk that an adversary may, and this a quote, "sabotage, maliciously introduce unwanted function, or otherwise subvert," end quote, national security systems. That is the language that Congress chose, sabotage or subversion, language that implies that undermining of our national security.

On an All-In podcast in March, you explained this in your own words, saying, and this is another quote here, "What if the software went down, some guardrail kicked up,

some refusal happened for the next fight, like this one, and we left our people at risk?" So that was the danger that you described, a mid-mission failure that would put American troops lives in danger.

Now here are the facts as we sit here today. Anthropic has been designated a supply chain risk, and your Secretary, Pete Hegseth, called the decision final. The President has ordered every Federal agency to stop using their products, and yet U.S. servicemembers have used Anthropic's Claude in combat operations against Iran since the strikes began on February 28th. Your Secretary's 180-day phase-out has not expired. As of March 24th, your own Chief Information Officer, Kirsten Davies testified to the Senate that Claude's use in U.S. military operations in Iran was, quote, "active" right now.

So I have got a question. It is two parts. Part one, if you are correct, if Anthropic's product is genuinely what Section 3252 contemplates, a national security supply chain risk capable of sabotage, subversion, or a mid-fight refusal that gets Americans killed, how does your Department justify leaving that product in the hands of our troops in an active conflict one second longer?

Mr. Michael: When they were declared a supply chain risk we stopped all updates permitted from that company, so we froze the code, and the cloud provider that it was

hosted on froze any access so that no change could be made in the code, so there was no risk of any mid-battle change in the operations of that.

Senator Kelly: But that also means there was no risk in the code as it was on the day that you said it could be used against the troops in a way that could put them at risk.

Mr. Michael: No, Senator, because before you came in I listed the things that were against their terms of service that, for example, their terms of service that we live under today to do battlefield management applications, target any military infrastructure of adversaries, direct interceptions like of a drone, or develop weapon systems. And that could still be built into the code, so we are just avoiding the use cases where there might --

Senator Kelly: Let me ask you a second question, though. If Anthropic's product is then -- it seems like what they are using is safe enough now, to remain in our soldiers' hands, in a shooting war against a foreign adversary, how does the Department justify branding an American company a sabotage and subversion risk under a statute that Congress wrote for foreign spies? It seems a little bit extreme. And one of these two things has to be wrong. Which is it?

Mr. Michael: The sophistication with which we use at

the Department of War is very nascent right now. The way we use it is still very early days. What we are worried about with the terms of service that they had and their posture toward the Department, which, when they questioned the Maduro raid and whether their software was used inappropriately, gave us the sense that this was not a reliable partner to deal with, given their --

Senator Kelly: Because they asked questions about how they product was being used, that means it is not reliable?

Mr. Michael: That in conjunction with their written terms of service, which prevent the use cases that we would like to advance into -- battlefield management, directing interceptions, developing weapon systems.

Senator Kelly: Well, here is the thing. There seems to be a theme here, that anybody who questions this Administration, questions the Secretary of Defense, offers some other route, some other idea that is not consistent with the leadership of the Department, you know, they are branded. In this case the company is branded as a subversion risk, and essentially fired because they started trying to have a discussion about, hey, what is the best use of this, or why did you do this this way or that way?

I think, you know, my view on this, after a lot of experience in the military and at other government agencies, if you are not asking the hard questions,

especially uphill, you are not getting the best out of your people, and you are not getting the best decisions. And my concern here, as you branded a company in a way that is harmful for them and their employees, you know, thousands of people that work there, but you also may have ultimately put our servicemembers at risk if they are, in fact, the best company to provide these services. They seem to be.

Thank you, Madam Chair.

Mr. Michael: Can I --

Senator Ernst: Yes, and you may, because Secretary Michael had listed now the partners that we do have that will be filling this gap. But yes, I would like you to respond.

Mr. Michael: Yes, Secretary. Every other major AI company, every single one, agreed to our terms. So this was not about questioning whether they dared to question us. We wanted to use their products for all lawful use cases, and Microsoft agreed to that, OpenAI agreed to that, Nvidia agreed to that, Google agreed to that. So every other company --

Senator Kelly: How many of those were after Claude got fired?

Mr. Michael: They were all after, because we only had one provider before we got in this deep.

Senator Kelly: Right.

Mr. Michael: And when we looked at the contract of that provider we said we cannot grow with that provider.

Senator Kelly: Do you think there is any chance they saw what happened to Claude, saw an opportunity, and then said, well, I know what I have to agree to?

Mr. Michael: Absolutely no. Maybe OpenAI. I will retract and say maybe one company that sort of tried to slide in, one of their direct competitors. But Google has been a longtime partner of the Department, Microsoft, Nvidia, real big companies with proper corporate governance, went through their legal teams, and agreed to our terms of all lawful use cases where Anthropic would not. So that should say something that our terms were not unreasonable. We were not trying to be unreasonable, vis-à-vis any one partner for any specific reason that they did not demonstrate themselves.

Senator Kelly: Who do you think is best equipped to provide these services today?

Mr. Michael: It depends on the application. I will give you some examples as to why. Google, for example, has a lot of video imagery because of their YouTube and Nest Cams, and therefore, from a robotics standpoint they may provide better capability from an autonomous weapons standpoint. Nvidia has an open source product which is going to be a crowdsourced capability that can compete with

the Chinese open source models, which are currently infiltrating a lot of the U.S. companies.

So each of them have different capabilities, which is, frankly, why independent of Anthropic I would have ensured that we have multiple providers, because the leader boards change on these providers every few months. It would not surprise me if next month you have OpenAI have a better cyber model than Mythos. So for us to be responsible to the warfighter, I have got to have all the options possible as these models change in advance.

Senator Kelly: What do you do about Mythos now, because that is Claude?

Senator Ernst: I think we will start wrapping up. Yes, thank you.

Mr. Michael: I think Mythos is the first cyber weapon model. OpenAI will have a cyber weapon model, Gemini will, all this calendar year, and then next year we will be worrying about bio and chem models as they start to train them with science and physics and equations and math. And we are going to have an ongoing discussion, and hopefully with Congress, about how we govern the rollout of these things that have good effects -- maybe they can cure diseases -- but then they have bad effects when in the hands of bad actors. And that is something that we are going to have to deal with as a nation.

Senator Ernst: Thank you. And I think this entire lessons is that, I believe, when the Department was negotiating those contracts with Anthropic we should have had the foresight, so the Department should have had the foresight to really question what was in those contracts. Unfortunately, that was not done, and we are in the situation we are today.

So I really appreciate all of our witnesses here today. This is an important discussion as we move forward with really every evolving technology. So I really appreciate your presence and your testimony in front of the Subcommittee on Emerging Threats and Capabilities today. And with that, we are adjourned.

[Whereupon, at 4:29 p.m., the hearing was adjourned.]