

OVERVIEW OF THE SMALL BUSINESS INNOVATION
RESEARCH AND SMALL BUSINESS TECHNOLOGY
TRANSFER PROGRAMS

HEARING
BEFORE THE
COMMITTEE ON SMALL BUSINESS
UNITED STATES
HOUSE OF REPRESENTATIVES
ONE HUNDRED SEVENTEENTH CONGRESS
SECOND SESSION

HEARING HELD
MARCH 8, 2022



Small Business Committee Document Number 117-048
Available via the GPO Website: www.govinfo.gov

U.S. GOVERNMENT PUBLISHING OFFICE
WASHINGTON : 2022

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TUESDAY, MARCH 8, 2022

HOUSE OF REPRESENTATIVES,
COMMITTEE ON SMALL BUSINESS,
Washington, DC.

The committee met, pursuant to call, at 10:01 a.m., in Room 2360, Rayburn House Office Building and via Zoom, Hon. Nydia Velázquez [Chairwoman of the Committee] presiding.

Present: Representatives Velázquez, Golden, Davids, Mfume, Phillips, Bourdeaux, Chu, Evans, Houlahan, Kim of New Jersey, Craig, Luetkemeyer, Williams, Stauber, Meuser, Tenney, Garbarino, Young Kim of California, Van Duyne, and Fitzgerald.

Chairwoman VELAZQUEZ. Good morning. I call this hearing to order.

Without objection, the Chair is authorized to declare a recess at any time.

I would like to begin by noting some important requirements. Standing House and Committee rules will continue to apply during hybrid proceedings. All Members are reminded that they are expected to adhere to these rules, including decorum.

House regulations require Members to be visible through a video connection throughout the proceeding, so please keep your cameras on. Also, remember to remain muted until you are recognized to minimize background noise.

In the event a Member encounters technical issues that prevent them from being recognized for their questioning, I will move to the next available Member of the same party and I will recognize that Member at the next appropriate time slot provided they have returned to the proceeding.

For those Members and staff physically present in the Committee room today, in accordance with the attending physician's most recent guidance, masks are optional and no longer required.

Thank you to everyone for being here for this timely hearing. Today, we will be discussing the SBIR and STTR programs, two of the federal government's most important initiatives when it comes to driving innovation. This is our third in a series of hearings on this topic.

SBIR and STTR create partnerships between federal agencies, public research institutions, and our nation's best and brightest

small businesses to develop technologies that are important to our country and later have commercial application.

The SBIR and STTR programs meet these goals by leveraging a small percentage of extramural federal R&D spending through highly competitive awards. For fiscal year 2020, the most complete year of SBIR and STTR data, these programs resulted in nearly \$3.9 billion out of an extramural federal R&D budget of about \$108.5 billion going to small, high-technology firms.

Over the years, SBIR and STTR have leveraged this small amount of federal R&D funding to launch some of our nation's most innovative enterprises and develop products that have become household names.

Companies like iRobot, Sonicare electric toothbrushes, 23andMe, LASIK Eye Surgery, and Qualcomm wireless communications were all helped along by SBIR and STTR.

More promising ideas are in the works. In fiscal year 2020 alone, 11 agencies leveraged SBIR and STTR awards to back more than 4,000 small businesses and 7,200 projects.

Given the importance of SBIR/STTR to our innovation economy, I am pleased that we are working together to reauthorize these programs before they expire on September 30th. A program lapse would have severe implications for American entrepreneurs.

Even a short-term disruption would deliver a substantial setback to R&D-focused small firms and potentially delay groundbreaking technological innovations. Small innovators operating on the cutting edge of their industries need more certainty and stability to invest time, money, and staff in applying for SBIR or STTR awards and carrying out the research.

To avoid these consequences, it is my greatest hope that we can extend and reauthorize the programs in a timely manner. I look forward to working with the Ranking Member and our Senate counterparts to take these steps.

At the same time, this moment allows us to make improvements to streamline and strengthen the programs, as well as encourage more participation by minorities and women.

Innovation is at the heart of the American economy. Making SBIR/STTR permanent and working to improve the program is vital to holding our position as one of the most innovative countries in the world. Today, I look forward to discussing the importance of these programs and what Congress must do to ensure they move forward.

I would now like to yield to the Ranking Member, Mr. Luetkemeyer, for his opening statement.

Mr. LUETKEMEYER. Thank you, Madam Chair.

Before I get started I would like to just take a moment of point of personal privilege to inquire of the Chair, now that we no longer have a mask requirement and we are no longer social distancing, is it going to be your position that we continue with hybrid meetings for the rest of the year or do you at some point believe we will go back to just strictly in-person meetings? Just for clarification purposes, please.

Chairwoman VELÁZQUEZ. I hope that soon we will all be able to come to Committee hearings and we are going to be discussing that with the leadership. I hope that pretty soon we will be back.

Mr. LUETKEMEYER. Okay, great. Thank you for that. I just am curious because we are making progress towards that end. I just would like to see where we are at.

I appreciate that clarification. And good morning. And thank you, Madam Chair, for holding this important hearing on the Small Business Innovation Research (SBIR) and small business technology transfer (STTR) programs. SBIR and STTR's mission is to support scientific excellence and technological innovation for small businesses. These programs are vital to the success of many small entities and have helped create thousands of new jobs by fostering innovation and stimulating the economy through new, cutting-edge research.

SBIR and STTR facilitate public-private partnerships so that firms have the funding they need to develop new technologies that help federal agencies meet the research and development needs. These programs not only create jobs, but they also lead to a path of commercialization for many participating firms.

SBIR and STTR are funding awards are behind the technology in products like iRobot, LASIK Eye Surgery, Qualcomm Wireless Communications, 23andMe, and rapid improvements to COVID-19 vaccines. These programs are not only essential for America's competitiveness, but also for our national security. From B-2 bomber technology to threat warning systems, SBIR firms have played a role in critical technologies used by our servicemen and women every day.

Further, SBIR and STTR programs are good investment for American taxpayers returning \$22 to the economy for every \$1 spent on projects at DoD and \$33 for every dollar spent at National Cancer Institute.

I see Mr. Williams is nodding his head here so that is good news.

As many of you know, Congress last reauthorized the programs in 2017 for a period of 5 years. The programs are currently set to expire on September 30, 2022. While these programs are not perfect, reauthorizing them will ensure stability and continued economic growth while Congress works to streamline and improve the programs. It is our job to better understand and address the challenges to the program's effectiveness and guarantee that American taxpayer dollars are being spent efficiently, effectively, and in a responsible manner.

I am looking forward to hearing from Mr. Williams on ways to improve SBIR and STTR for small businesses and participating agencies alike.

Now for a couple housekeeping items. Number one, while I am glad Mr. Williams is here today to discuss these important programs, the Biden administration is still overlooking the Members of this Committee. We are now 318 days past the April 26th deadline for Secretary Yellen to testify before this Committee. We must hold Secretary Yellen accountable for the decision to blatantly break the law.

Furthermore, in yesterday's Washington Post, we have a picture, an advertisement of Ms. Yellen who is wanting to have either webinar or some kind of visual discussion with regards to, and one of the topics is to discuss the COVID hit to our economy. Would

not the PPP program be something that you want to discuss? If that is the case, why are we not here? Why can we not get here?

Madam Chair, we have got by law, supposed to have Ms. Yellen here twice this year. Twice in 2022. I would hope that she is working with your staff to find a way to schedule those two events. I am looking forward to it.

Item number two. The Committee is still waiting on responses from questions for the record submitted to SBA officials over 9 months ago. I talked about this with Ms. Guzman in a personal one-on-one conversation I had with the director about 2 weeks ago and we still have not got those responses back. Again, I would urge SBA, and Mr. Williams, I hope you take these measures back to your administration hierarchy to respond to these questions quickly. These are not gotcha questions. These are informational requests that actually round out the things that we are trying to find in these hearings so it is very important we get this done.

And with that, Madam Chair, I yield back the balance of my time and look forward to today's discussion.

Chairwoman VELAZQUEZ. Thank you, Mr. Ranking Member. The gentleman yields back.

With that, I would like to introduce our witness, Mr. John Williams, the director of Innovation and Technology for the Office of Investment and Innovation within the Small Business Administration. Prior to joining the SBA in 2014, Mr. Williams served as the Director of the Navy SBIR and STTR programs, building a reputation for running the most successful SBIR and STTR programs in government.

Welcome, Mr. Williams. You now have 5 minutes to make your opening statement.

STATEMENT OF JOHN WILLIAMS, DIRECTOR OF INNOVATION AND TECHNOLOGY, OFFICE OF INVESTMENT AND INNOVATION, UNITED STATES SMALL BUSINESS ADMINISTRATION

Mr. WILLIAMS. Good morning, Chairman Velázquez, Ranking Member Luetkemeyer, and distinguished Members of the Committee. Thank you for the invitation to discuss the nation's Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Programs, and the role SBA has in leading them.

I have had the personal pleasure of devoting 35 years to public service, including 15 years as the director of the Navy's SBIR/STTR, and Technology Transfer program offices.

During my time at the Navy, my primary focus was on helping SBIR firms transition their technology and commercialize it into Navy platforms. I am proud to note that the Navy lead the DoD in Phase III funding throughout my tenure.

In December 2014, I excitedly accepted the opportunity to serve as the Director of Innovation and Technology at SBA. My office supports SBA's mission and our nation by ensuring that U.S.-based innovative startups have the tools, resources, and support to start, grow, and expand.

Our role is to build a national innovation ecosystem that supports all innovators wherever they live so that the best and brightest have the opportunities to succeed. The SBIR and STTR pro-

grams, which we like to refer to as America's Seed Fund, function as the heart of this ecosystem.

America's Seed Fund provides competitive opportunities for small businesses to pursue high risk, research, and development with a focus on commercialization. These programs are a critical component to our national innovation ecosystem. They facilitate job creation, de-risking of technologies, while also addressing significant societal and national defense needs.

America's Seed Fund represents the nation's largest source of nondilutive seed funding, meaning these investments do not require companies to sacrifice equity. Annually, across the 11 participating agencies, more than \$4 billion is provided through competitive awards to U.S.-owned and operated companies with less than 500 employees. There are winners in every state. The structure requires that 3.2 percent of an extramural R&D appropriation of an agency is applied to SBIR, and for agencies with an R&D exceeding \$1 billion, an additional .45 percent for STTR. The program's structure means that the SBIR and STTR programs do not require a separate appropriation and therefore, do not result in additional costs to the taxpayer.

The funding is provided in phases with multiple layers of competition. Importantly, over the last year, nearly 46 percent of the participating firms were first-time award winners. Bringing in new entrants, especially from underserved geographic and demographic communities is a priority. Since I started at SBA, the percentages of new entrants has increased by 30 percent, and multi-award winners has gone down by 25 percent.

For nearly 40 years, the SBIR and STTR programs have served as a critical need funding source for the U.S.-based advanced technology firms. The National Academies of Sciences have completed 20 studies and continue to document that these programs are highly competitive and a critical tool that converts America's research into next-generation technologies. The program increases competition within the federal research and development community as it creates a level playing field for small businesses to participate.

Companies such as Qualcomm, Intuitive Surgical, Illumina, 23andMe, Sonicare have all received funding and the Department of Defense has also found a 22:1 return on investment from their SBIR investments.

Under the current law, the program expires on September 30. The time for solicitation opening to the time of awards being made is 6 to 12 months. We are now within 7 months. My concern is if Congress does not extend these programs soon, agencies will start to delay solicitations and awards. Due to the potential program expiration with no fiscal year 2023 funding clearly available under those programs. The impact results from this uncertainty and instability will fall most heavily on small business innovators, especially those new to the program. Through an extension of the programs, you will provide stability and certainty around America's Seed Fund and provide time for Congress to develop and implement a comprehensive reauthorization. America's Seed Fund attracts and supports some of the brightest innovators and provides innovative cost-saving capabilities to the public and our national defense.

I thank you for the opportunity to appear today and I thank the Committee, especially Chairwoman Velázquez and Ranking Member Luetkemeyer to the support to ensure that SBIR and STTR programs and their current pilots are extended as is while the Committee continues to work on a full reauthorization. Thank you for your time.

Chairwoman VELÁZQUEZ. Thank you, Mr. Williams.

Now I will recognize myself for 5 minutes.

Basically, you almost ended your opening statement with my concern regarding the effects of a long-term impact of a program lapse, or the threat of a lapse on small businesses and the agencies, particularly given the data that you are just providing where there has been an increase in new participants into the program. What effect will a lapse or a threat will have?

Mr. WILLIAMS. So a lapse would be catastrophic. It would mean \$4.2 billion to the fund, 4,000 companies actively, 7,000 awards would really go to large prime contractors, the big universities, back to the federal labs. So, it would really decrease competition in federal R&D funding. And I would not result in cost savings and that is the big thing because, again, this is appropriated money that is already there. It is just being made sure that it goes to small businesses.

I think the threat of that lapse then is the agencies are going to start to gear back, start to not put out new solicitations because it will be next year when those things take place and they really should not be getting companies involved in something that they do not have funding for.

Chairwoman VELÁZQUEZ. So the lack of certainty provided by continuing resolutions will have an impact on the agency?

Mr. WILLIAMS. Absolutely.

Chairwoman VELÁZQUEZ. I will ask unanimous consent to submit for the record letters of support from 117 small businesses, universities, and economic development groups supporting the clean extension of the SBIR and STTR programs.

Without objection, so ordered.

One of my top priorities for the upcoming reauthorization, Mr. Williams, is to improve the participation of minority and disadvantaged persons in SBIR and STTR and to increase the geographic diversity in this program that has been my quest for the last 20 years.

In your experience, what strategies have worked and what challenges remain?

Mr. WILLIAMS. Sure. So, increasing geographic and demographic diversity is a priority of mine. It is the mission of SBA. It is certainly a priority for Administrator Guzman. My experience is that the leveraging and coordinating of a variety of private and public partnerships really works. There is not a "one size fits all." You need support locally. I think we can push national programs and education, but then locally you want to have programs like our Fast and Growth Accelerator really make a difference and so more of that I think will allow us to help more people at that local level in those areas.

Chairwoman VELÁZQUEZ. Okay. NSF and NIH offer supplemental grants to SBIR and STTR to provide paid fellowships for

underserved students. Can you briefly explain how these fellowships work and the impact they have had?

Mr. WILLIAMS. Sure. So, NIH has a program where they use a supplement to the award and they give it to the company to bring in a diverse researcher. And then with NSF, they use a third party that then finds and connects post-docs with small businesses.

Chairwoman VELAZQUEZ. Do you think this approach is worth expanding to other agencies?

Mr. WILLIAMS. So I think the approach is worth expanding. But I think also there is a lot we can do, and should be doing to try to link students as young as possible to the excitement of what and small business does in tech. And so, I think there is a lot of opportunities. I have seen companies really get excited in bringing in students and summer hires and things like that even at the high school level. I think it gets people involved in STEM.

Chairwoman VELAZQUEZ. Where should funds for fellowships come from? For example, should we use the base SBIR and STTR funds like NIH, those? Or the 3 percent administrative dollars?

Mr. WILLIAMS. So the current legislation allows both and I think there is flexibility in having that flexibility for the agencies.

Chairwoman VELAZQUEZ. Have the staff and budget for the Office of Innovation kept pace with the growth of the program over the years?

Mr. WILLIAMS. The total funding for the SBIR programs has increased as we have noted, as has the responsibilities for SBA. The resources at SBA have not increased. I have got an amazing team that does treat stuff with what they have but, yes, if we had additional resources I am confident that we could do a lot more to help, and especially the underserved communities in getting out there and bringing on more—

Chairwoman VELAZQUEZ. If Congress legislated SBIR agencies to transfer a portion of their 3 percent administrative funds to SBA, how would that help your office administer the program?

Mr. WILLIAMS. So it would expand a lot of the things we do. More outreach, more train the trainer, more coordinating with our Growth Accelerator and our FAST to provide information. More getting them together, building out our website. So again, it is easier to get access, better data handling so that we could push out information. So, there are a lot of areas. I think mentor networks. There are a lot of areas and I would be glad to talk to you about them.

Chairwoman VELÁZQUEZ. Thank you. My time has now expired.

The Ranking Member is now recognized for 5 minutes.

Mr. LUETKEMEYER. Thank you, Madam Chair.

Mr. Williams, you indicated you had some service in the military with the Navy. Thank you for your service, sir, to our country. The programs that you oversee seem to have been very successful the last several years and I thank you for your leadership on that.

Along those lines though I have got a couple of questions here. In 2011, to address Congress's concerns, the SBA created a commercialization benchmark to better determine the eligibility for the SBIR and STTR programs or awards I should say. However, according to GAO, SBA and I quote, "The SBA and the participating

agencies assessed small businesses against the commercialization benchmark only once in 2014 because of challenges in collecting and verifying the accuracy of data.”

I guess let me start with this. Whose responsibility is it to provide the assessment and why did the SBA measuring small businesses against the benchmark only occur once in the last 10 year span?

Mr. WILLIAMS. Well, we do do it now. But I will go back to the history. So, the legislation came forward. There are performance metrics. One is Phase I to Phase II transition and then the other commercialization Phase II to Phase III. Phase III information is cumbersome and DoD does collect it or had been collecting it for many, many years. And so, what we wanted to do was to move to a single source. We did not want to have 11 agencies collecting the same data and putting the burden on small businesses. DoD was the primary one but other agencies also collected that information. And the legislation really required that those agencies implement a standard.

And what is important to note is that even without that, the potential to commercialize the past history of Phase IIs, that goes in every proposal and every agency evaluates in one of the main three criteria on the potential to commercialize. So, has that company done a good job with that in the past? That is what they are measured on. And so, the information is being looked at on every proposal and has been. Now we have actually implemented, we have taken over the DoD system and we have a central system at SBA starting in 2020 that all firms now have to put, and it is a single source for all Phase III information.

Mr. LUETKEMEYER. So basically what you are saying, it has been the responsibility of other agencies to collect this information and do the benchmarking up to this point?

Mr. WILLIAMS. So we have transitioned to that because it just did not make sense. So, we set the requirement of what a transition benchmark would be with coordination across all the agencies. And then as we work to do it, they were then evaluating on whether they felt these firms—

Mr. LUETKEMEYER. Okay. So, we can anticipate in the future this information is going to get to us?

Mr. WILLIAMS. Yes. Yes.

Mr. LUETKEMEYER. That is necessary for our oversight.

Mr. WILLIAMS. Absolutely.

Mr. LUETKEMEYER. I mean, it is not something that is, you know, it is in law. It is supposed to be addressed.

Mr. WILLIAMS. Yes. No, we have a system that does and we can provide that information.

Mr. LUETKEMEYER. Okay. All right. Great.

In your testimony, you mentioned some stats about 46 percent increase in the last few years with new people coming into the program. And that is a 30 percent increase from when you took over. So, can you explain to me just a little bit about how this works from the standpoint that existing businesses are getting repeat awards? Is there a point in time when they get weaned off of this assistance? Why are the existing businesses continuing to get these

awards and maybe pushing out some new businesses? Can you explain the situation?

Mr. WILLIAMS. Sure. So, I am going to go back to my Navy days. And this is not an assistance program. This program is designed to make sure that when we develop R&D by an agency and so it is the DoD and I have specific R&D's needs, I have to go to a small business instead of the major primes that typically is what happened. So, in the DoD, it is——

Mr. LUETKEMEYER. So you are soliciting that individual business yourself rather than them coming to DoD with a bid to bid on their project; is that what you are saying?

Mr. WILLIAMS. So I will give you an example. Progeny Systems had I think over 300 awards over a 20-something year period. They now build all the torpedoes for the Navy. They are still a small business. That is not a capability that really existed. So, the SBIR program, by awarding companies multiple times, we are bringing in companies into a program. As you probably know, the DoD, there are only a few big players now. And so, when we were in the Navy, when I was at the Navy, we used the program to bring in competition. And it was not that a company would get one or two or three or five awards and then we would never need to continue to fund the R&D. We continued to fund them because we wanted that additional capability. And sometimes in areas that no one was interested in because it is not economically viable to develop some circuit board for us because there was only five of them needed. Same with NASA. You are building three products. One to blow up, one to put on the space shuttle, and one to have as a backup.

So, I think it is important to understand that it is not the same for all. Now, NSF is different where they would not do that. They do look at funding companies a couple times and then they want to see those transitions. So, it is not a "one size fits all."

Mr. LUETKEMEYER. I appreciate the clarification. Thank you, sir.

Mr. WILLIAMS. Thank you.

Mr. LUETKEMEYER. With that I yield back.

Ms. DAVIDS. I will now recognize myself for 5 minutes.

First of all, thank you to the Chairwoman and to our Ranking Member for holding this hearing today.

The reauthorization of the SBIR and STTR programs is definitely one of the most important tasks in front of the Committee this year and is, of course, of critical importance. The SBIR, STTR, and the FAST partnership program, as well as the Growth Accelerator Fund competition offer critical opportunities for innovators and entrepreneurs to develop their technologies and to build their businesses as we have been hearing today. But especially in the tech space. And I know it can be hard for entrepreneurs outside of tech hubs on the coast to find investors and partners and we heard the Chairman earlier reference geographic diversity as being kind of critical to the work we are doing here.

So, Mr. Williams, I would love to hear from you how the various programs we are talking about today are able to reach more entrepreneurs or businesses and research institutions outside of those tech hubs in places like the Midwest or the Kansas 3rd. We do have a couple of SBDC, women's business centers and those

sorts of things, but I am just curious how you all are thinking about it and what we can be doing.

Mr. WILLIAMS. Sure. You know what is unique about the programs that have been funded that I manage with FAST and Growth Accelerator is that they really target the unique needs of a tech entrepreneur which is very different than kind of a traditional company. They are non-revenue generating at that time. They cannot really get loans. And so, I think what we found is it is not a "one size fits all." It is really about bringing connections. And so, we want our FAST and Growth Accelerators to leverage the SBDCs and their capabilities. Reach out to the district offices. And so, we do a lot of training to the SBDCs and others to let them know about the program and that there is a group out there. And it is usually at a research innovation hub outside the university that has really taken that university research that we would then fund. They will bring in venture capital. And again, there is more money out there that is small that is teaming with these accelerators and innovators and so we see that as kind of, it is not a one size. It is bringing all these parties together.

Ms. DAVIDS. And then I am curious, this is actually to follow on from Mr. Luetkemeyer's questions about the data collection. You kind of started to talk about the new system that you are implementing where the SBA is kind of the repository of information versus the various agencies. I am curious how you are looking at that and how are you taking into account demographic information and geographic information?

Mr. WILLIAMS. So, there are a couple of pieces of information. We gather information on Phase III directly is what I was talking about there. But then all the information from the awardees comes to us by each agency and in that the company is supposed to tell us, woman-owned, demographic data, and then we track that. So, in our annual reports, we list the awards per state, the awards by women, the proposals by women, the awards by women. We are also starting to now link to SAM so that we can kind of validate that. So that is a role that we play is to gather all that data together and then look across. And absolutely, that is one of the areas we measure.

Ms. DAVIDS. And I think I will stop there. I do not have enough time to get into the next set of things.

Mr. WILLIAMS. And I will just say that data is available on our website at all times. It does not have to be in the annual report. Our data is current on fiscal year 2021. We are probably 80 percent full and you can pull down woman-owned and you can sort and it is Excel. And so that information is always available and we are trying to push it out.

Ms. DAVIDS. Okay. Thank you, Mr. Williams. And thank you for the work you all are doing. It is certainly an improvement over the years. So, thank you.

Mr. WILLIAMS. I appreciate that. Thank you.

Ms. DAVIDS. I yield back.

I am yielding back. The Ranking Member—oh, sorry about that.

Mr. Fitzgerald is now recognized for 5 minutes.

Mr. FITZGERALD. Thank you, Madam Chair.

Mr. Williams, thanks for being here today.

Fiscal year 2022, the NDAA extended the pilot program for streamlining the awards for innovative technology projects, such as awards under SBIR, until 2024. Under the pilot program, and maybe you can give me a little bit more detail, any contract or sub-contract valued at less than \$7.5 million is exempt from certain costs. So, I am not sure why the \$7.5 million was the magic number. It could be just congressional wisdom. I am not sure. But we could not track that down. But there is no pricing data disclosures per se.

So as this Committee kind of does its due diligence on this before we vote to extend on SBIR and STTR, is there any better metrics that you are aware of or is there any better way of measuring this, especially when you get down into that, below that threshold? It seems like it should be a critical piece of legislation before we would actually take that step and reauthorize.

Mr. WILLIAMS. So unfortunately, I am not as aware with that piece of legislation on the NDAA.

Mr. FITZGERALD. Yeah, I think because some of the pilot programs were part of the NDAA, and I think ultimately that final, when that final appropriation package comes before us that there is going to be kind of this question about I think the level of funding. And that is why I was just looking if there is some better metrics that we should be looking at, or better set of numbers.

Mr. WILLIAMS. So, I will be glad to follow up and really get into it because I want to make sure I give you a proper answer. The amount for a Phase II is set at like \$1.8 million. They can go above that by 50 percent. Anything past that they have to come to SBA for a waiver request. And then we approve those on a case by case basis. And so, there are certain agencies, the Air Force to be an example, where they were coming in with additional matching dollars from a Department of Defense weapon system, so non-SBR being added to SBR money. And even outside money. And that encouraged me to then allow them to make higher awards. And we did that on a pilot. So, there have been some pilots to experiment that certain technologies just takes more money and they need it quicker. Instead of doing six Phase IIs over a 3-year period, would it be better to do a larger Phase II if other dollars came in during that development process? And that is what we have been approving. And it has to come through SBA to approve those waivers.

Mr. FITZGERALD. I gotcha.

I will put something together and make sure that you get it. I have very specific questions.

Mr. WILLIAMS. Yeah, absolutely. I would appreciate that.

Mr. FITZGERALD. The second question I had was in and around semiconductors. And I think the chip stuff. So, I think that is going to come up, and I know there are other Members who are going to talk about that. So, I would yield back. Thank you.

Chairwoman VELAZQUEZ. The gentleman yields back.

Now we recognize the gentlelady from Pennsylvania, Ms. Houlahan, for 5 minutes.

Ms. HOULAHAN. Thank you, Madam Chair. And thank you, Mr. Williams, for your testimony today and for your role administering the SBIR and STTR programs.

I am an entrepreneur and an engineer myself, and I, as a result, do understand how important America's Seed Fund is to all aspiring innovators and small businesses and to research institutions across our country.

I believe this Committee must have an eye for consistently improving the SBIR and STTR programs, particularly when it comes to commercialization. Across the 11 participating agencies, only about half of the SBIR and STTR awards result in products that are commercially sold. Furthermore, delays in decisions and disbursement of funds or patents can present particular challenges for small businesses who are seeking to translate their investments into marketable products and services.

To address these challenges, I have worked across the aisle with my colleague, Representative Balderson, to introduce the Research Advancing Market Production (RAMP) for Innovators Act. This bipartisan and bicameral piece of legislation would ensure that our federal government is prioritizing research with the highest commercialization potential, significantly reducing the time agencies must take to make a final decision on proposals and establishing an annual commercialization impact assessment at every agency to monitor the program's success and more.

So, Mr. Williams, I was hoping that you might be able to speak to the importance of enhancing commercialization outcomes through SBIR and STTR programs, and particularly, I am interested in hearing from you about how changes, such as those that might be provided by RAMP, would allow American entrepreneurs the support that they need to get their products on shelves and increase the economic impact of the programs at large.

Mr. WILLIAMS. So anything we can do to help on the commercialization side is obviously important. And that was a big thing that I did at the DoD. And again, I think some of the challenges, like I mentioned, the commercialization of DoD is very different. Sometimes we do not want anyone selling products of the DoD. So, it is a criteria for evaluation. So, there are basically three criteria. The value of the technology; the team, how good they are at it; and then the potential to commercialize that. And so, I think it is always valuable, that those are important factors and that they are all there. And I think some of the RAMP Act, make sure that the right people are helping in that evaluation process and there are some resources with USPTO who we work with very closely. Patents are an issue, so things that can reduce the cost of patents. All those things can help small businesses and those are challenges they run into.

Ms. HOULAHAN. I 100 percent agree with you having struggled through those kinds of processes myself. It is a race in many cases to get something to a shelf or into a store or into somebody's hands and I think that time matters and expertise matters. So, I appreciate your insight into that.

Given that the proven value delivered by SBIR and STTR is demonstrable, I have heard from a lot of stakeholders and businesses who have asked that Congress should address the uncertainty that is associated with what I have seen here in my few years, frequent and very sporadic reauthorization of programs. They have shared that it would be better if we would be able to have a more reliable

stream of reauthorization and it would result in less fraud, waste, and abuse. So, from your experience in the ONR, the Office of Naval Research, could you please speak a little bit about how the SBIR and STTR programs have delivered valuable research back to the 11 participating agencies and how would a longer term authorization or permanency of the program allow for relationships and benefits for the American people to be able to continue and grow?

Mr. WILLIAMS. Sure. Anything that creates continuity. And so, there is a lot of, especially in commercialization, people relying on that part. So, the DoD, if we were going to be part of a missile system that was a 10-year program and we were funding it for 4 years and that went away and they was not sure that it was going to be after that, they would not include that as part of the program. That is a design risk that just would not be done. So, the goal is to try to get these systems, especially the DoD, which is half the program, into these weapon systems, into these programs. And if there is not a guarantee then that is a risk. And the same with the private sectors. Investors are not willing to invest. But we have seen more incubators and others established that are using the SBIR program funds as a tool, which we want them to do, but if it is not going to be there, are they going to provide the resources to train people to really understand what the program is, to build the relationships with the program managers? So, there are a lot of pieces to this and stability in longer term just creates more stability that we can plan for. And at program offices, you cannot hire people and things like that if it is a 2-year program. So, it feeds it in a lot of different ways.

Ms. HOULAHAN. Thank you. I have run out of time and I yield back, Madam Chair.

Mr. WILLIAMS. Thank you.

Chairwoman VELAZQUEZ. The gentlelady yields back.

Now we recognize the gentleman from Pennsylvania, Ranking Member of the Subcommittee on Economic Growth, Tax, and Capital Access, Mr. Meuser, for 5 minutes.

Mr. MEUSER. Thank you very much, Madam Chair. And thank you, Mr. Williams, for being with us. And as Ranking Member Luetkemeyer said, thank you for your service, your work for our country, and in your work you clearly have the knowhow and dedication. So that is great to see.

First, Madam Chair, I do want to bring up what Ranking Member Luetkemeyer has mentioned a number of times and that is the absence of Secretary of Treasury, Janet Yellen. It is kind of inexplicable that the law states and the requirements are to appear before this Committee within timeframes and yet the requests seem ignored. And so, I just want to go on the record saying that is really irresponsible and kind of hard to believe, actually.

But moving on. Moving on. So, Mr. Williams, hearing you out, it sounds like you have got a very focused plan and you are there for all the right reasons, to figure this out. It is a pretty bit operation you are running. What are your goals for this year? What are your macro or micro goals, within 60 seconds if possible for the year?

Mr. WILLIAMS. Sure. I am an office of four. I am not a big organization. So, my goal would be to actually grow that and be able to provide more resources. Really, on the underserved, there is,

again, this trick, goal is to get legislation making sure because, again, that is something that now I have to spend a lot of time on. And then if we know there is FAST and Growth Accelerators, because those will be the programs that we really believe we can get to underserved states, if we have those funds that we would then need to manage and execute and get those awards out quickly.

So potentially on the 11th, I am going to have a budget of some type, and then once I get that, my job is to execute that as quickly as possible because the money does not do any good in Treasury. It has got to get to helping small businesses.

Mr. MEUSER. You have an office of four. So, but you have how many clients? How many—

Mr. WILLIAMS. Well, I have a lot of clients. I guess it depends on how you look at it. I consider you my client. We have the small businesses, the agencies.

Mr. MEUSER. Business clients.

Mr. WILLIAMS. So we deal less directly with the companies. Our goal is to build this national innovation ecosystem so we have 84 Growth Accelerators that we work with that are funded this year. We have 33 FAST awardees. So those are groups that we work with, that we have contracts with, and that we monitor. And then we have an ecosystem. We just have calls and we connect with people we do not fund but that we try to provide information to them. Our goal is to kind of share the information in one place and push it to those that need it.

Mr. MEUSER. Is it possible for me to get a list of the number of businesses that have accessed and utilized and gained support from—

Mr. WILLIAMS. So, I mean, there are 7,000 awards made, 33,000 proposals submitted every year, about 4,000 to 5,000 companies. Our website is over a million hits every year. But I can give you any more detail.

Mr. MEUSER. In Pennsylvania or just in my district for that matter?

Mr. WILLIAMS. Yeah, I can give you that information. Actually, it is on our website. SBIR.gov. You can pull up each year, each agency. But I can get you that, too. Absolutely.

Mr. MEUSER. All right. Good. I will do that. Thanks.

So, you do see, and I am sure you are aware of this and are focused on doing everything you can to change it in a reasonable way. But certain areas of the country utilize the program far more than others, such as the northeast and the West Coast, as well as some companies receive upwards of 50 Phase I awards in a single year. That is not necessarily a bad thing. It could be a good thing. But how would you explain that? It seems a little lopsided?

Mr. WILLIAMS. I will have to look into the 50 Phase I awards. I mean there are a couple reasons why certain places in the country do not get as much awards. VC funding goes to five states, 80 percent of it. There are infrastructure issues that exist and so that is why we really believe there are great universities throughout the country, that that is a good place for us to lock into. FAST and Growth Accelerated established, they are now much more focused in transitioning to research that they were not really years ago and it is that forming of a kind of translational side of NSF where we

are really going to start funding more of that basic research. The small businesses are the glue to that. Those are the ones that are going to be motivated to take that and then they will stay locally. And so, I think that is what we need to do is more programs to put some boots on the ground in those places and help them get access to this program. It is still a government program. Government programs are not always the easiest and so we want to train new people.

Mr. MEUSER. Real quick. You probably will not have time to answer this, but provide us, or me, any specific recommendations you have that we can help you improve the program because it sounds important.

Mr. WILLIAMS. Stability. And I think some of these resource programs that we talked about so we can do more would help.

Mr. MEUSER. I yield back, Madam Chair.

Chairwoman VELAZQUEZ. The gentleman yields back.

Now we recognize the gentleman from Minnesota, Chairman of the Subcommittee on Oversight, Investigations, and Regulations, Mr. Phillips.

Mr. PHILLIPS. Thank you, Madam Chairwoman. And thank you, sir, for being with us today.

Both SBIR and STTR are examples of government policy that in my estimation aid, not obstruct, private sector initiatives, which I celebrate, specifically for R&D. They are programs that drive competition between small businesses to develop innovation in both products and services. We all know that every large enterprise began as a small startup, including such iconic Minnesota companies like 3M and Medtronic just to name a few. They were innovators which developed new technologies in their industries and grew into two of the world leaders in both medical devices and manufacturing. They are the types of successes to which America should aspire and which we, in Congress, have to support. And of course, they did not do it alone. No business does it alone. Federal investment in R&D and commercialization of new technologies plays a really meaningful role in generating success. So good government policy should incentivize those best practices in the private sector.

So, Mr. Williams, you well know, many countries around the globe are rapidly increasing their investment in government funding dedicated to small business R&D. I know you have worked with SBIR and STTR and the small businesses that have used them for many years during your career. So, I would like to get a sense from you, what is the ROI on every dollar that both SBIR and STTR distributes?

Mr. WILLIAMS. So the only measures that we have are a DoD study. And I am going to get the years wrong but it was a 10-year timeframe that I think ended in—well, I will not quote it. But it was a 10-year timeframe. And that was the 22:1 ROI. And then the Cancer Institute was the other major one. Navy has done a study but the Cancer was 33:1. These studies are expensive and so there have not been a ton of ROI studies but those are two landmark ones. And then the Academy of Sciences has done some studies that have all shown substantial ROI. But I think one has to be careful of not just focusing on ROI because, again, this program is

designed to address the mission needs of that agency, and to that agency, having the research done, and sometimes having research fail is of value.

Mr. PHILLIPS. Yeah, agree.

But fair to say that increasing the percentage of R&D budget set aside for both SBIR and STTR would surely help drive innovation in small business; true?

Mr. WILLIAMS. I think so. Yes.

Mr. PHILLIPS. Yeah. I think it is also fair to say that programs like these really have a complementary relationship with VCs. Ms. Tung, VP of Research at 23andMe, a company that was aided by SBIR, described that in a hearing that we hosted last spring. Are there ways that you believe we can encourage more public-private sector collaboration in both programs?

Mr. WILLIAMS. So I think if we had some more resources. I do not know if you know but we have a program in my sister office, the SBIC program. Certainly, that is a program that could look at investing. But we work with the National Venture Capital Association. So, I think our ability to get out there more and to be able to help document the technologies and where they are in building those bridges would help to kind of bring that network together.

Mr. PHILLIPS. Okay. Venture capital and SBIR investments are often directed at different industries and different types of small businesses, of course. How can SBA more clearly distinguish between existing small businesses and new high-growth startups?

Mr. WILLIAMS. Well, the ones all listed under the SBIR program on SBIR.gov I would consider all high growth. And so, they are available on that site. We are always looking at better ways to provide more information but there is a lot of information on our website that talks about those companies. So, I think that is the best place.

Mr. PHILLIPS. Okay. And lastly, something on all of our minds is fraud and abuse in all federal programs. Is there anything that you might share with the Committee on how we could aid both oversight and fraud prevention in these programs?

Mr. WILLIAMS. I think the legislation that came out in 2011 set into motion a couple of things that we have done. Setting up these 10 requirements that each agency must implement. I worked closely with the IGs. We developed that with the IGs. We post fraud, waste, and abuse issues on our website. We have training on fraud, waste, and abuse. So, I think a lot of the things are out there and they are being implemented.

Mr. PHILLIPS. All right. Well, thank you, sir. That is all I had and I appreciate your time with us today.

Mr. WILLIAMS. Thank you, sir.

Chairwoman VELAZQUEZ. The gentleman yields back.

Now we recognize Mr. Williams, Vice Ranking Member of the Committee from Texas.

Mr. WILLIAMS of Texas. Thank you, Madam Chairman. I appreciate that promotion. And there are more Williamses in here than not in here today. I appreciate that.

In 2017, I helped pass the Tax Cuts and Jobs Act which provided historic relief for small businessowners and Americans across the country. This bill revitalized the U.S. economy, making it more

globally competitive, and unfortunately, a critical provision of this bill expired at the beginning of 2022, and now businesses will no longer be able to deduct the cost of research and development from their taxable income in the year they incur the cost. This will reduce tax benefits for companies investing in R&D and will result in less domestic innovation, fewer jobs, and SBIR and STTR programs were established to increase participation of smaller companies and fairly funded research and development. So, without this tax benefit, there will be a dramatic reduction in business incentives to invest in R&D.

So, Mr. Williams, do you agree that allowing the R&D tax credit to expire will negatively impact small businesses and entrepreneurs? And how could less R&D affect American innovation and competitiveness?

Mr. WILLIAMS. So this is not an issue that I am really familiar with. It is not something that comes up to small businesses that they have expressed their concern on this.

Mr. WILLIAMS of Texas. Well, I will just tell you, as a small business owner, too, any time that you can get a positive cash flow to invest in R&D or even buy equipment it helps. So, we need to do everything we can to get that back in the program and put more cash in the hands of main street.

Now, secondly, during the pandemic, various federal agencies were tasked with getting money to the American people as fast as possible. Unfortunately, the SBA was by far the worst at distributing business savings funds for the last 2 years and now we are hearing that the Biden administration is calling for more COVID-19 money even as inflation soars and billions have gone unspent from his last partisan COVID bill. The administration should be focusing on alleviating the supply chain crisis, solving the worker shortage, and lowering regulatory costs because these are the major concerns for small business owners across the country.

So, my question to you would be part of your responsibility as a director at the SBA is to advise businesses on how to grow and succeed. I think the SBA should be totally pro main street. How do we create businesses to be successful? And so, what advice would you give to small business owners right now who are concerned about the high inflation and the effect it will have on their businesses?

Mr. WILLIAMS. The one thing that I think helps is that every year we adjust the amount that they can get in an SBIR and STTR award based on inflation. So, we are always making sure that that amount goes up every year. And then——

Mr. WILLIAMS of Texas. It is going up this year, is it not?

Mr. WILLIAMS. It will probably go up this year. Yes, sir.

Mr. WILLIAMS of Texas. Yeah.

Mr. WILLIAMS. And so our goal is really to just get, I mean, my role is to get more people involved in it and get more money to them. That is the R&D program funding of the SBIR and STTR.

Mr. WILLIAMS of Texas. Let me ask you another question from a tax standpoint. Do you think that lowering taxes benefits small businesses like those in the SBA or raising taxes would be good for small business?

Mr. WILLIAMS. So the program I work with is SBIR and the issue of taxes is not one that is raised to me.

Mr. WILLIAMS of Texas. Okay. All right.

Madam Chairman, I yield my time back.

Chairwoman VELAZQUEZ. The gentleman yields back.

Now we recognize the gentleman from Pennsylvania, Mr. Evans, for 5 minutes.

Mr. EVANS. Thank you, Madam Chairperson. Thank you for this hearing. This is very valuable.

Increasing diversity in entrepreneurship in technical startups is important to me coming from Philadelphia, a city that has nearly 50 percent Black. And Black and Brown citizens make up most of the 25 percent of Philadelphians in poverty. Entrepreneurship is a tool in the economic toolbox to lift people out of poverty. SBA still has the same level of diversity in the Small Business Innovative Research and the Small Business Technology Transfer program as it did 10 years ago. Does SBA coordinate with historical Black colleges and minority services to expand awareness of these programs to help applications? Can you respond?

Mr. WILLIAMS. Yes. Thank you, sir. Great question.

So, we have done a couple things. And again, this is an area that is a high priority to me. We just actually got some funding from NSF to award a contract with Howard University that is on an SBR Inclusion Study to really better understand the barriers that underserved founders have with getting access to SBIR and STTR. So that is an ongoing program and we are going to learn from that and share that information with not just the agencies but other schools. We have a longstanding working relationship with MBDA. They were part of our conference this year. They have been the last couple of years but when we had this virtual conference, 41 percent of those registrants were from underserved representatives. And that was the biggest event that MBDA has had.

I also, about 2 years ago, signed a memorandum of agreement with MSRDC, so that is the MSI STEM R&D Consortium that is made up of 60 MSI and HBCU research schools. And we feel that that is a really good group because, again, trying to get SBIR awareness to those communities. And so, I think the next big step really though is to have some funding like there would be potentially in Growth Accelerators in FAST so we can have offices at those HBCUs to provide that direct training and bring more people into the program.

Mr. EVANS. There are nine such institutions in Pennsylvania, four which are in my home city of Philadelphia. So, I am interested to hear does SBA work with them?

Mr. WILLIAMS. So we work with all universities. Now, with SBIR and STTR, in my role we will mainly just work with technical schools that are developing the types of clients that we believe would apply. But yes.

Mr. EVANS. I thank the gentleman. I yield back the balance of my time, Madam Chair.

Chairwoman VELAZQUEZ. The gentleman yields back.

Now we recognize the gentlelady from California, Ranking Member of the Subcommittee on Innovation, Entrepreneurship, and Workforce Development, Ms. Young Kim, for 5 minutes.

Ms. YOUNG KIM. Thank you, Chairwoman. And I want to thank Mr. John Williams for joining us today to discuss the SBIR and STTR programs.

The SBIR and STTR programs are critical tools for small businesses to research, develop, and commercialize innovative technologies and help create good-paying jobs.

China and other nations are taking considerable steps to bridge the innovation gap with the United States and knock us down as the world leader in innovation. While we must not relent our country's position as the leading innovator and developer of emerging technologies, Congress must ensure that programs like SBIR and STTR are adhering to their allocation requirements meeting timeliness guidelines and safeguarding taxpayers by successfully commercializing technologies and getting them off the program.

So, Mr. Williams, the Small Business Act requires the SBA to report annually to Congress on the SBIR and STTR programs. Unfortunately, SBA compliance with this requirement has been an ongoing issue. Without the timely reports, it is difficult for Congress to legislate and improve the programs.

So, in your view, what steps is SBA taking to meet the reporting requirements as mandated by law?

Mr. WILLIAMS. Sure. Thank you for the question.

So, what we have really focused on since I have come is getting the quality of the data up, making sure we are getting complete data from all the agencies that first collected from the individual companies, and then get that on the site. And so, the second an agency submits their information on awards to SBA, it is posted on our SBIR.gov website. That site allows for downloads. It has got over 170,000 awards on that site from the beginning of 1982. We really focused on the last 10 years, making sure that that data was as accurate as possible. So, our push was really to make sure the data is there, can be downloaded and looked at in real time, and also looked at in trend form and things like that.

For the current 2021 report, the data is due by March 15th from the agencies so we have not started on that. We are working on the 2020 report and we have got that in paper form and that will then start the external review process then before it gets to Congress. But I would stress that really all that information is out there and we make sure it is available, transparent, downloadable, and it is a massive amount of data. Each award has over 80 records and so there is a lot of information on that website about what we do.

Ms. YOUNG KIM. Thank you.

You know, I am concerned that the effectiveness of the programs vary by agency and some agencies are more successful in others in responding to requests in a timely manner. Do you believe it might make sense to standardize some of the paperwork requirements across agencies to improve timeliness? And do you think SBA has a role to play in helping agencies standardize proposal review procedures?

Mr. WILLIAMS. So, timeliness is in the legislation and we then measure the time from a solicitation closing to the selection to the award and then the gap between Phase I and Phase II. Different agencies based on FAR and DFAR and some of the regulations

have different timelines that have been established by Congress. And so, we work with those. And so, our role is to measure those. Measure the agencies. Measure what they are doing on every award and then to document that and provide that information to Congress.

Ms. YOUNG KIM. Thank you.

One more question. Some companies have received upwards of like 50 Phase I awards in a single year. What can we do differently to make sure other companies have a fair shot in receiving the awards? Because it does not seem fair that a few companies are receiving the bulk of the awards.

Mr. WILLIAMS. The numbers on multi-award winners, which is over 15 awards that they have ever received, is down 25 percent in the last 5 years and the percent of first-time applicants is at 46 percent currently right now. So that is about 2,000 companies every year new to the program year over year. So, I think it is really up to the agencies then to determine why are you awarding to the same company. And again, the goal of the program is to solve the mission needs of that agency and to pick the best technology solution for that. And so that is what the agencies do. They understand the transition. All that information is in the proposal for them to evaluate.

Chairwoman VELÁZQUEZ. The gentlelady's time has expired.

Now we recognize the gentleman from New Jersey, Mr. Kim, for 5 minutes.

Mr. KIM. Thank you. Thank you for taking the time to be able to come talk with us, Mr. Williams.

I wanted to ask you about something that I came across in the district. So, I have a joint base, McGuire-Dix-Lakehurst in my district, and as I have been talking to them about entrepreneurship and innovation and kind of bringing in the work of small businesses, they talked about how they did a pitch day when it came to SBIR/STTR. I know as I dug into it more, the Air Force has been moved forward on a number of these types of ditch days in which they have been able to streamline the process and often even be able to make initial awards on that same day.

So, I guess I wanted to ask you just what you thought of that process, how it has been working and whether or not there is something there that the other departments and agencies might be able to pick up on, have been intrigued by this model.

Mr. WILLIAMS. Sure. So, Lakehurst is great. When I was at Navy they did pretty much all our contracting and we went to a central single source of contracting which I think was one of the more valuable tools than just about anything that the Navy did. And I know the Air Force has done some of that because, again, when you spread contracting out you get different types of contract shells and things like that. And so, standardization of those kind of things, centralizing it, at least at the Navy, created great value and it allowed us to make awards more quickly.

There are pros and cons to pitch days. There is a lot of time and effort that goes into some of those things but they have shown some interesting results on awarding instantaneously and so I think I am a big proponent of we experiment. We allow the flexibility that the legislation allows and we measure the time it takes.

And so, when things work well, again, we have monthly meetings with all the program managers, that we share that information and we learn from best practices and what we are seeing the Air Force and others do is tweak some of those things. So, they take what works and continue. So, anything that accelerates the time to award is absolutely something we are supportive of.

Mr. KIM. Yeah. And so, you are saying that you are actively keeping track of this process.

Mr. WILLIAMS. Yes.

Mr. KIM. And analyzing how it has been working for Air Force. And what are some of the other departments and agencies? Which other ones are utilizing this model right now?

Mr. WILLIAMS. The Air Force is the lead in the pitch day but I know a couple of the other Department of Defense ones are looking at it. I personally do not think it is a "one size fits all" in this area because some of them are in person. But yes, that is the main one, is the Air Force.

Mr. KIM. Well, one other aspect of this, and I think this kind of gets at some of what you were saying about pros and cons and see how it goes and track it, there have been some concerns raised though about the diversity of those that are participating when it comes to pitch days as well as the reviewers. I think there are some concerns that we are not necessarily hitting the kind of racial diversity and the diversity that we want to through these types of efforts right now.

So, I guess my question to you is, is that kind of demographic tracking happening in terms of understanding who is gaining access to this, whether through pitch days or other types of processes? I just want to make sure that we are thinking through things in that kind of whole way.

Mr. WILLIAMS. So demographics are measured from the proposals and awards made and we even are now moving to breaking down that in SAM to really understand because the challenges of an African American are different than an Asian American. And so, yes, those things are tracked. And so, I think what needs to be understood is there is a low percent of African American tech companies that exist today. Our woman-owned companies in tech are 15 percent. We get about 15 percent of the proposals, make about 15 percent of the awards. So, the issue is we need to figure out how to get more African Americans to start a tech company and then that again is probably boots on the ground, FAST programs, Growth Accelerators to kind of really figure out what works, and that is why we are excited about this project we are doing with Howard to really understand what are those barriers? Why are they choosing not to start a high tech company and instead maybe going to work for a big defense contractor or something else.

Mr. KIM. Okay. Great. Well, thank you for talking to me about this and we will follow up on some of this.

I will yield back my time.

Mr. WILLIAMS. I appreciate that. Thank you.

Chairwoman VELAZQUEZ. The gentleman yields back.

Now we recognize the gentleman from New York, Mr. Garbarino, for 5 minutes.

Mr. GARBARINO. Thank you, Madam Chair. Thank you very much for holding this hearing, and to the Ranking Member.

I have some questions about the SBIR and STTR. Federal agencies need to, when they invest they have the extramural research budgets. The SBIR, I believe they use 3.2 percent of those budgets have to go to small businesses and to the STTR, .45 percent of those agencies' budgets are extramural research budgets have to go to small businesses. Where did those numbers come from, the percentages? Is that said in law? Can we raise that so more small businesses can participate in these programs?

Mr. WILLIAMS. Yes, it is in the law and it is up to Congress to determine those levels.

Mr. GARBARINO. Is there enough demand that we should increase these levels, the percentages?

Mr. WILLIAMS. When you say is there enough demand are there enough high-quality proposals?

Mr. GARBARINO. Applications. Could we fulfill more participation—

Mr. WILLIAMS. So the only data that I have is that the Academies of Science and others have studied and looked at, and this exists with other federal funding, too. So, it is not unique to SBIR. But they do not get to fund all the high-quality proposals. So that is the case with SBIR but it is also the case with other programs.

Mr. GARBARINO. So you are saying that they do not get to fund everything they want to, so increasing that number would help them with that? Can they spend more than the 3.2 or is it required that they only spend 3.2 percent to the SBIR?

Mr. WILLIAMS. It is a minimum floor.

Mr. GARBARINO. It is a minimum floor. So, they can spend more if they want to?

Mr. WILLIAMS. Yes.

Mr. GARBARINO. Okay. Do they spend more?

Mr. WILLIAMS. No.

Mr. GARBARINO. Okay. So, they are doing the bare minimum. Okay. And that is the same thing for the STTR as well?

Mr. WILLIAMS. And I think actually there are one or two agencies. I think Homeland in the past has spent more but that is probably one of the few.

Mr. GARBARINO. Okay. How do you ensure that they do spend the minimum amount of money? Because I have had some—

Mr. WILLIAMS. We spend a lot of time measuring that. That is one of the reasons our reports take so long.

Mr. GARBARINO. Okay.

Mr. WILLIAMS. But that is a big part of the measurement is to determine the total extramural R&D spend that year compared to then that is the denominator, the numerator of what they spent and obligated. Yes. And that is part of the reports.

Mr. GARBARINO. So I have had some complaints from some contractors in my district, military contractors that say that DoD does not keep up their spending and I do not have any way to say that they are wrong or they are right so that is my question to you. So, every year you make sure that your reports ensure that these agencies are spending the minimum amount that is required?

Mr. WILLIAMS. No, our reports report what they are spending as we measure it and we compare it to other things.

Mr. GARBARINO. Have any of these agencies missed the mark, the amount that they are supposed to?

Mr. WILLIAMS. The answer in the way we report it, the answer is yes. The challenge with the DOD is they have 2-year funding. Their funding continues to go up. They typically spend SBIR. They spend a percent of the SBIR in the second year so we are trying to get more transparency in understanding the year of the funding and the year of the obligations which is challenging but I do believe that all agencies are spending the minimum amount. It is just not in that year and the way we measure. And we measure it based on the way the legislation is written.

Mr. GARBARINO. Okay. So, what happens if they do not spend the money. You think they are but they might not be. The numbers say they are supposed to be spending this minimum amount, what happens if they do not?

Mr. WILLIAMS. So I think they are. I think it is over time but the legislation does not address that issue. We report it.

Mr. GARBARINO. They are required to spend it but there is nothing to hold their feet to the fire if they do not?

Mr. WILLIAMS. Well, there is Congress. We report it to Congress.

Mr. GARBARINO. Oh, Congress. Yeah, there is us. Okay.

A separate question. How many companies or small businesses, and you might have mentioned this before. I know somebody was asking about the return on investment from the dollars invested. How many companies or small businesses make it all the way to Phase III?

Mr. WILLIAMS. So there is reports, and I would really reference the National Academies of Sciences reports. So, it is in the 50 to 65. It depends on the agencies. And again, you do not want it to be 100 percent. You do not probably want it to be much more than it is because it is cutting edge R&D that you do not expect all to transition. But that data is in the Academy of Sciences reports.

Mr. GARBARINO. I appreciate it. I am running out of time so I thank you for your answers and I yield back.

Chairwoman VELAZQUEZ. The gentleman yields back.

Now we recognize the gentleman from Maryland, Mr. Mfume, for 5 minutes.

Mr. MFUME. Madam Chair, thank you very much for the opportunity to both you and the Ranking Member.

Director Williams, hello.

Mr. WILLIAMS. How are you doing?

Mr. MFUME. I am pretty good. And I appreciate your time here as something that we do not take for granted but it is part of our responsibility to do oversight and to follow up, particularly on programs such as the two we are talking about today.

I know your authorization runs through September 30th. I think it is fair to say that this Committee wants to make sure that reauthorization occurs because of our concern for innovation, technology, and research. I do want to at some point follow up on the gentleman from Minnesota's comments about ROI. Return on investment is important to me. I happen to Chair a Subcommittee on

Contracting and Infrastructure and perhaps I will take that up in that Committee.

But what I would like to turn my attention to right now is to go back to the comments offered up by the gentleman from Pennsylvania regarding diversity, specifically with HBCUs.

Director Williams, in 1982, the gentleman whose picture hangs on the wall here behind me, Parren Mitchell, was very instrumental in creating the programs that we are here talking about today and very insistent at the time of that creation on diversity. Ten years later, in 1992, I Chaired the Subcommittee of this Committee on Minority and Women Business Enterprise. And I reiterated 10 years later the concerns that Congressman Mitchell had, the founder, that we really needed to see a reduction in multi-awards, that we wanted to see increase in access to a number of ways to get organizations and people applied, and that we wanted to make sure that there was real diversity with woman-owned, minority-owned businesses. And at that time the emphasis was specifically in 1992 on Black, Latino, and woman-owned businesses.

So, it is ironic we are 30 years after I held those hearings. We are talking about the same two very important programs. And for me, the irony here is that there is such a similarity of what the hearing 30 years ago dealt with to where we are today. So, the fact that we have real concerns about diversity, the fact that there are still many, many multi-awards that are taking place. I think you said around 46 percent; is that correct?

Mr. WILLIAMS. No, 46 percent are brand new awardees.

Mr. MFUME. Awardees. Yeah.

Mr. WILLIAMS. I think it is 27 percent have won more than 15 awards.

Mr. MFUME. Yeah. So that is why I can appreciate your 8 years in your position. I have got a longer view on this. A longer perspective that goes back 30 years and remembering the 10 years before that. We really need to get beyond where we are. Because if not, I think the next time around for reauthorization, you and the agency are probably going to face a real bulwark of resistance by those of us who do not understand why we cannot find a way to do what we say we are going to do 40 years ago when it was begun and 30 years ago when I held hearings on this. There has got to be some sort of way, particularly with HBCUs and MSIs, not to go to one college or one university or one consortium but to ask the question, why are we not doing more here and what are the keys? The key in many respects is where you are going I think and where you have to go are schools that have engineering programs, STEM programs, and R2 colleges and universities that will give you the people who can, in fact, apply. I think there has to be increased access to early stage technical assistance to facilitate greater diversity among the program participants. And we have heard concerns in the past about the barriers that women and minorities faced then in 1992 and now today women, minorities, and those in rural areas just to be able to get matching funds because of where they are. So, there are real concerns. I do not have more than 5 minutes to discuss my agony here if I can use that term, having lived and watched this. I am not here to condemn you or to blame you but I am condemning the process and what may have preceded you be-

cause this is, as Yogi Berra once said, *deja vu* all over again. We have not moved an inch from where we were.

So, my time has expired. I want to thank the Chair for allowing me to have the opportunity to chime in. I hope, sir, that you would take these concerns so that this time next year when we are talking about reauthorization, some of the answers then will go far beyond where they are now, particularly in terms of increased participation and diversity for women, minority-owned businesses, and others.

Thank you, Madam Chair. I yield back.

Chairwoman VELAZQUEZ. The gentleman yields back.

Now we recognize the gentleman from Minnesota, Mr. Stauber, for 5 minutes.

Mr. STAUBER. Thank you, Madam Chair, and to the Member who just spoke. I really appreciate some of the things you brought up and the perspective that you come at these issues with.

As with every government program, finding success is not always easy. When I first got to Congress, I assisted a small business, obtained feedback from the Air Force regarding the SBIR applicant denial. They were never able to get a straight answer before my involvement, but I was certainly happy to help get things cleared up for them.

Mr. Williams, can you speak to requirements, if any, of providing feedback to SBIR and STTR applicants when their applications are denied?

Mr. WILLIAMS. I know at Navy we had a process where we would provide electronic feedback on all of them and then follow up. So, I will have to get back to you on the specific rules because the rules really are not associated with SBIR and STTR. They are associated with how an agency runs a grant and/or a contract and how they go out. So, they follow the same rules that they do for any types of proposal situations and grant situations.

Mr. STAUBER. Will you get those to our office or get it to Madam Chair for us so she can distribute it?

Mr. WILLIAMS. Sure.

Mr. STAUBER. Thank you very much.

And then we talked about standardization of paperwork across the agencies which would help increase participation. And you even alluded to the timeliness. Are there any things that you can suggest to us on the timeliness or change of the timeframes from your experience? Because a couple of questions you had answered, well, it is Congress's role. Can you give us some ideas on specifically the timing from your expertise that we should be looking at reference legislation change?

Mr. WILLIAMS. So I think all agencies are committed to reducing timeliness and it is something we measure; we talk about a lot. There are restrictions and a lot of them are FAR, DFAR, policies at those agencies. And so, it is hard for me to speak on one or two. And I know the GAO has done a study to look at that and they have kind of looked at some of these things. So, I would be really glad to work with the offices and really bring in different, because it has got to be brainstormed. And it is really the procurement and contracting organizations, not the SBIR shops that need to get involved because that is where it happens. Those are the regulations

that control these things. And there is a good reason for some regulations. And so, we always want to balance doing things too fast and making sure we are checking everything.

Mr. STAUBER. What other barriers to entry have you identified in your time as director?

Mr. WILLIAMS. I think a lot of it is, again, I am really proud that we have got 46 percent of the awardees every year are new. I am not proud that we do not do that across the country, especially with some of the underserved. So, I think we need to do more and it is really a resource-based thing of getting systems in place where training on SBIR and STTR is available. Access to wet lands is available. Mentors are available to help those that are underserved that are not getting access or understanding of this program so they can write proposals and win awards. I am a big fan of trying to do that.

In the post-doc there was a hearing here. One of the post-doc individuals, an African American, he got access to one of our Growth Accelerator funds that helped them pivot a little bit but it while he had some other programs going on and funding. So post-docs are a great place because they are getting funded to be there anyway. They are used to eating Ramen and things like that so that is a good time to get them to write proposals, win awards, and start new companies.

Mr. STAUBER. You talked about some of the things that needed to be changed to help the program become successful and we talked about some of the barriers for some small businesses that want to come into these programs. Would you say that this administration's \$201 billion in additional regulations in year 1 and the \$130 million of new compliance hours are barriers to entry for startups?

Mr. WILLIAMS. I have not seen any of those affect what we do. The barriers that startups talk about are barriers that have been in place for a long time.

Mr. STAUBER. The \$201 billion in additional regulations in one year, is that good or bad for small businesses?

Mr. WILLIAMS. So I have not heard any of my small businesses that I work with reference any specific, but if there are certain ones that I should be aware of, I would be glad to work with you on that and try to figure that out.

Mr. STAUBER. My time is expired. Madam Chair, back to you. Thank you.

Mr. WILLIAMS. Thank you.

Chairwoman VELAZQUEZ. The gentlelady from California, Ms. Chu, is recognized for 5 minutes.

Ms. CHU. Mr. Williams, I am fortunate to represent California's most prolific research institution, the California Institute of Technology, Caltech. Caltech has partnered on more STTR grants than any other research institution in California. I believe that is a major reason why my district in Pasadena, California, in particular, has become such a hub for technology-focused startups and small businesses. This includes companies like iRobot which you mentioned in your testimony.

In your experience working with these programs, how do surrounding communities benefit from proximity to qualified research institutions that participate in SBIR and STTR? What are the sec-

ond order investment, employment, and innovation impacts supported by SBIR and STTR?

Mr. WILLIAMS. I do not have specific numbers on that. I believe that SBIR and STTR can really accelerate economic development in areas that are underserved because if you get that, those are high-growth companies that rapidly grow and then they can support another layer of small businesses that are providing supplies and support and things like that. So, I certainly think it is a great way to get economic growth by investing in that and the university systems. And there are many universities that should be playing a bigger role in the program and we are starting to see that.

Ms. CHU. Thank you.

And Mr. Williams, I would like to follow up on your reference in the testimony that you provided on efforts to increase participation by woman-owned small businesses and SBIR and STTR. A study conducted by the National Women's Business Council found that across the 11 agencies that participate in these agencies, only 14 percent of Phase I awards were made to woman-owned businesses. And while some agencies, such as the Department of Education are awarding nearly 40 percent of their grants to woman-owned small businesses, agencies that focus on STEM fields, such as the Department of Energy, still only award 10 percent of their grants to woman-owned small businesses. Although this is an improvement over the dismal 3.5 percent they were awarding to woman-owned small businesses in 2011, it is still not enough.

Can you talk about the direct work that you are doing at SBA to encourage more woman-owned small businesses to participate in these programs? And in particular, I want to know, how are you measuring success in increasing women's participation? Is it just that the number of awards granted or are you also measuring the number of woman-owned small businesses that apply to the program? Are you increasing the number of women who serve on peer review panels?

Mr. WILLIAMS. So the study I am very familiar with because we performed that study for the National Women's Business Council. And the data that it also showed was that woman-owned STEM companies was pretty close, was in that 15 percent range of the amount proposing and the amount winning. It did vary. So, as you mentioned, certain agencies, and a lot of that seemed to be tied back to the pipeline, in STEM areas, in physics and things like that were lower in women than they were in education and they were in other areas. And so, we saw a lot of correlation with that.

Now, that said, I certainly think what I would like to see more of is finding grad students, women while they are in college and figuring out what the barriers are for them to start a small business and take the risk. And so, we have seen some success. Oklahoma FAST has done a great job of having cohorts of just women first-time applicants and been very successful at getting them to win and thus starting the process of forming new minority, new woman-owned companies, and that is where we really need to put more time and effort. And yes, we do measure all those things though that you mentioned.

Ms. CHU. But how about increasing the number of women who serve on peer review panels? Or do you even track that?

Mr. WILLIAMS. So we have not measured that. It would not be easy to measure. But what we have seen though and we do measure is do we see a bias? So, do we see the percent of proposals being much different than the percent of awards? And we have not seen that.

Ms. CHU. And also, on peer review panels for participants of color, do you track that?

Mr. WILLIAMS. So again, everything data we get has to be kind of a requirement. We are not required, nor do we ask for that data from the individual agencies. I think some of the agencies have looked at that on their own but no, that is not a required data element to submit to us.

Chairwoman VELÁZQUEZ. The gentlelady's time has expired.

Now we recognize the gentlelady from Texas, Ms. Van Duyne, for 5 minutes.

Ms. VAN DUYNE. Thank you very much, Chairwoman Velázquez, and Ranking Member Luetkemeyer.

Mr. Williams, thank you very much for coming and testifying in front of our Committee today.

One of the main issues of SBIR and STTR programs are their slow timelines. A GAO report last October stated that just 9 of 29 agencies were consistently on time on making their awards within the required 6 months which some argue is too long of a timeline already. So how is the SBA working to streamline the bureaucratic barriers to expedite these award timelines?

Mr. WILLIAMS. There are a couple of things SBA does. We measure and we document that information and really, the focus on that measurement has been more of a concentration after Senator Carden added some legislation into the DoD bill. So, we certainly measure all those types of things and we report back on that. We meet monthly with all the program offices, I mean, with all the agencies' leads and we talk about what is working well and what is not working well, sharing best practices. Are there certain red tape issues that could be removed by us? Or is it certain policy things, FAR and DFAR regulations that they would need to work more together with us to remove?

But at this point, our main focus is sharing best practices, putting a light on the issue because we certainly would love to see up from proposal to award and gaps between awards go down as much as possible.

Ms. VAN DUYNE. I really appreciate you bringing up the red tape issue because I have heard that from a number of our small businesses that we have been having roundtable discussions.

So how can Congress eliminate some of the red tape, some of the paperwork for these small businesses that are trying to participate in these programs? Do you have anything specific? I appreciate you trying to put a light on it but what specifically can Congress do to eliminate some of these paperwork hassles?

Mr. WILLIAMS. I am comfortable answering that. It is a lot of certain regulation, FAR, DFAR that are again structured for overall contracting and grants processing to make sure that the federal government spends money in a way that is efficient and effective and gets the best for the taxpayer. So, there is always a balance between those things.

Ms. VAN DUYNE. Do you believe it might make sense to standardize some of the paperwork requirements across agencies? Could that help speed up the process?

Mr. WILLIAMS. I think we have standardized what we can and what right now, there is pushback. Well, it is not pushback. They are working in own environment that says this is how a proposal needs to come in to us. This is the tool. Grants.gov was a big tool. NSF had a system. So, they have certain systems that everything comes through. SBIR is just one of their systems.

Ms. VAN DUYNE. So when you say "they," "they are working in their own, in their own system" who are you talking about?

Mr. WILLIAMS. Yeah, the agencies.

Ms. VAN DUYNE. Okay.

Mr. WILLIAMS. Each agency has rules on how they accept proposals.

Ms. VAN DUYNE. And I understand that the agencies have different rules. But as Congress, we can actually help to set up some of these standardized templates; right? I mean, like having a standardized contract template, for example, that all agencies could use that might aid the agencies and have each of their own. I know when I worked at HUD, we had problems when we were responding to some of these disasters because HUD had a different requirement than FEMA had a different requirement and so on and so forth and it was burdensome for the user.

Mr. WILLIAMS. Yes. So, I do not disagree that standardizing, simplifying our valuable. I think a lot of it also goes on that the workforce at those facilities to be able to put the time and effort on those contracts also is a challenge. So, more staffing in the grants and contracts shops to get these things out.

Ms. VAN DUYNE. So that would help them if it was one. Staff was not having to work on individual as well?

Mr. WILLIAMS. So it could help. I mean, I know I worked to do standardization at the Navy and the more we streamlined and combined contracting into single shops it helped us accelerate.

Ms. VAN DUYNE. I appreciate that.

What metrics does the SBA use to measure the overall success of these programs? And besides overall amounts of funding and success stories, how do you know the program is achieving its intended goal of promoting commercialization?

Mr. WILLIAMS. Of commercialization success. Okay, because we measure a lot of different things. But commercialization, so companies are required to submit Phase III information, non-SBIR funded information on any Phase II award they had when they are applying to the program. We ask them to update that for 5 years. We also though go out and look at all the awards that have been made. Is there other information we can gather on them? There is no legal requirement for us to gather Phase III information so a lot of it is success story but there are certainly better tools out there today. But certain tools out there that financial industry uses to be able to gather information. But commercialization success is not the same across the board so I am concerned with just measuring the follow-on investment as opposed to this was a product that went into a military system or into the NASA row that we sold two

of. It was not “commercialization” but it was very, very valuable research that was done.

Ms. VAN DUYNE. And I am sorry; my time is up. I yield back. Thank you.

Mr. WILLIAMS. That was my fault.

Chairwoman VELAZQUEZ. The gentlelady’s time has expired.

I just would like to share with the gentlelady regarding the federal Acquisition Regulations that she made reference to—they do not fall under the jurisdiction of the Small Business Committee.

Mr. WILLIAMS. Correct. Thank you.

Now we recognize the gentlelady from New York, Ms. Tenney, for 5 minutes.

Ms. TENNEY. Thank you, Chairwoman Velázquez, and Ranking Member Luetkemeyer, for holding this important hearing today. And thank you to the witness for your time and your insight.

I am honored to currently represent New York’s 22nd Congressional District which stretches from the shores of Lake Ontario all the way to Pennsylvania border. This region has a strong innovation heritage for centuries as a pioneer of the Industrial Revolution in the United States, as well as the birthplace of IBM—many find that hard to believe—in Binghamton, New York. And current headquarters for Rome Lab, the Air Force Research Directorate. The area around Rome Lab especially hosts a vibrant ecosystem of upstart companies solving a wide range of issues from cybersecurity to artificial intelligence to the future of drones and their potential to improve our lives and national security. Many of these companies have benefitted from the Small Business Innovation Research and Small Business Technology programs and the financial assistance they provide to small businesses to develop and commercialize innovative technologies.

Even with these successes, however, we cannot ignore the need to improve on this program. Currently in the SBIR program, a mere 95 firms account for more than 20 percent of all award funding. Surprising, however, these companies provide some of the worst returns on investments of any beneficiaries in the program. In addition, among Air Force SBIT and STTR Phase II contracts, researchers found that there was an inverse relationship between federal dollars awarded and commercial success.

And finally, there is a need to increase the return on these public investments to American technological and industry prosperity. This includes prioritizing companies that are working to expand production domestically in the United States and are developing new products and technologies that shore up and secure our domestic supply chains. We also need to focus on companies that have the highest potential at commercializing their technology and providing the taxpayers with the best return on investment. These programs were not created to be a competition of which companies can create the best white paper. It is essential we return them to their original purpose of ensuring the federal government and the American people have access to world class domestic innovation.

So, Mr. Williams, with that being said, are you aware of this small group of companies who dominate the SBIR/STTR programs taking up 20 percent of the funding awarded every year? And what are your thoughts on an annual cap potentially?

Mr. WILLIAMS. So we report all that to Congress and that is part of our report. We list out any company that is awarded more than 15. We break out the percentages and stuff. So yes, that is part of my job in being aware of it.

My experience at the Navy would argue against caps because we are looking to have the best technology available to address a need. And the reason that my program office is going to put it on a weapon system is because they know it is the best technology. The companies that we funded at the Navy actually were the best, even with the large primes. We were funded the best of the best and I think that is a really important feature. So, the role of the program is to address the mission of that agency. It is not an economic development program or a VC program to kind of advance it but some agencies that is their role. So, I think it is not a "one size fits all" when it would come to a cap and that would be my concern.

Ms. TENNEY. How would you improve the caps? Obviously, caps, there might be a great program and a cap would prevent us from having a great program. I think I understand maybe that is what your mission would be, but how would you get around that and make sure that we really are focusing on the mission, getting back to the mission and making sure that we are focusing on, for example, the domestic side of it and then the ability to commercialize these innovations that are coming out? We have amazing innovation around our Air Force research lab. I mean, just the companies that are coming up with tremendous technology in cyber and drone technology. How would you do that in a way that we can sort of prioritize where this money goes?

I only have a minute left.

Mr. WILLIAMS. So, yeah, I think that is what the agencies do. So, the agencies are evaluated on commercialization potential. Is it going to insert into whether it is a weapon system or the National Science Foundation, the private sector. So, it is a major part of the proposal and it is a major part of the evaluation factor to look at the potential to commercialize.

Ms. TENNEY. So quickly, and so commercializing and maintaining sort of an onshore critical supply chain, do you think that is something we can do? Can we restrict some of the foreign investment and limit say China and other companies from getting access that have received some of this funding? And is there a way that we can do that, to prioritize and really bring the commercialization and our supply chain back here, especially in a de-industrialized region of upstate New York where my district is?

Mr. WILLIAMS. Sure. I would probably argue that small businesses are more likely to do things in the U.S. and keep things in the U.S. and they are going to help. So SBIR is helping to advance the supply chain in the U.S. because it is investing in technologies that will be built here.

Ms. TENNEY. Great. Thank you so much. I am out of time. I yield it back. Thank you.

Mr. WILLIAMS. Thank you.

Chairwoman VELAZQUEZ. Mr. Williams, you have to have a U.S. company to get money.

Mr. WILLIAMS. Yes. U.S. owned and operated. Absolutely.

Chairwoman VELÁZQUEZ. Okay. Thank you.

Well, thank you, Mr. Williams, for being here today and for sharing your expertise in this area. Today's hearing has provided many concrete examples of the way SBIR/STTR help small businesses and our country as a whole. It has also shed light on the importance of reauthorizing these programs. As these companies pursue groundbreaking research that will benefit our society, they need assurance that the federal government will support them in their efforts. We can provide that by passing legislation to make these programs permanent and codifying the central tenets of the program.

Without objection, Members have 5 legislative days to submit statements and supporting materials for the record.

If there is no further business to come before the Committee, without objection, we are adjourned. Thank you.

[Whereupon, at 11:42 a.m., the committee was adjourned.]

A P P E N D I X



**Testimony of John Williams
Director of Innovation and
Technology
Office of Investment and Innovation
U.S. Small Business Administration**

**before the
House Committee on Small Business**

**Hearing on “Small Business Innovation Research and Small
Business Technology Transfer Programs”**

March 8, 2022

Testimony of John Williams
Director of Innovation and Technology
Office of Investment and Innovation
U.S. Small Business Administration

Good morning, Chairwoman Velázquez, Ranking Member Luetkemeyer, and distinguished members of the committee. Thank you for the invitation to discuss the nation's Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Programs, and the role the Small Business Administration has in leading them. SBA's mission is to help small businesses start, grow, and expand. And within the Office of Innovation and Technology we deploy resources, training, and policy that ensure the most innovative small businesses and startups have the opportunity to compete for federal research and development funding. Our role is to build a national inclusive innovation ecosystem that supports all innovators so that the best and brightest can succeed. The SBIR and STTR programs, which we like to refer to as America's Seed Fund, function as the heart of this ecosystem.

I've had the personal pleasure of devoting more than 35 years to public service. In the first 10 of those years, I worked at a Navy Lab managing advanced manufacturing projects, many executed by our largest defense prime contractors. I then moved to the Office of Naval Research where I was first exposed to the SBIR program and got the opportunity to work with small business innovators who demonstrated a unique drive and passion for advancing innovation and transitioning technology. These small business innovators ignited a passion within me and provided a fulfilling opportunity to work directly with them managing numerous SBIR and STTR projects before serving 15 years as the Director of the Navy's SBIR/STTR and Technology Transfer program offices.

During my time at the Navy, my primary focus was on helping small firms transition their technology into Navy systems and platforms. To support their navigation of the complex Federal acquisition processes, we developed special programs that provided awardees with business and commercialization assistance that culminated in an annual innovator showcase. This showcase facilitated exchanges between entrepreneurs and the follow-on funding sources within the Department of Defense (DoD), the largest prime system integrators, and other marketplace stakeholders. These initiatives were especially valuable to the more geographically rural and new program entrants. Through these, and other initiatives, the Navy led DoD in Phase III funding throughout my tenure.

In 2014, I excitedly accepted the opportunity to serve as the Director of Innovation and Technology at the SBA, with responsibility for leading the coordination of the SBIR and STTR programs across all the federal agencies.

The Office of Innovation and Technology supports SBA's mission, and our nation, by ensuring that innovative US-based high-tech startups and small businesses have the tools, resources, and support to start, grow, and expand. We do this by working to ensure that America's Seed Fund (the SBIR/STTR programs) provides a competitive funding opportunity for our innovators. This includes establishing policy, providing federal-wide program oversight and

monitoring, and increasing awareness through outreach – with a particular emphasis on underserved geographic and demographic communities.

Additionally, we work with participating agencies on data-gathering and reporting, and provide significant training to tech entrepreneurs, external organizations, resource partners, and others across the federal government through our Train-the-Trainer initiative. We manage the SBIR.gov platform, which is designed to be a one-stop shop for potential applicants, but also provides transparency into the awards made by the Federal agencies. SBA also provides direct resources to innovation ecosystem support organizations that provide innovative startups the pre-launch, mentoring, and scaling support they need to successfully win SBIR or STTR awards.

Our current funded innovation ecosystem partners include 84 Growth Accelerator Fund recipients distributed across 43 states, the District of Columbia, and the territories. The Growth Accelerator Fund conducts a prize competition for accelerators and incubators to speed the launch, growth, and scale of high-tech small businesses. We also manage the Federal and State Technology (FAST) Partnerships program with awards in 32 states and Puerto Rico. Through FAST, we provide funding and guidance to organizations executing state/regional programs with a focus on increasing the number of SBIR/STTR proposals leading to successful awards, with a specific focus on underserved geographic areas, women, and socially or economically disadvantaged individuals. Central to our innovation ecosystem-funded programs are the SBIR and STTR programs, America's Seed Fund.

America's Seed Fund provides competitive, merit-based opportunities for innovative, US-based small businesses to pursue high-risk scientific and research endeavors with a focus on commercialization. These programs are a critical component of our national innovation ecosystem, facilitating job creation, de-risking technologies – often at the pre-seed stages – while addressing significant societal and national defense requirements.

America's Seed Fund represents the nation's largest source of non-dilutive seed funding, meaning these investments do not require companies to sacrifice equity in their small business. Across the 11 participating Federal agencies more than \$4 billion is provided through competitive awards to US-based companies, owned and operated by US citizens, with 500 or fewer employees, annually. The structure of the program, which has been maintained over its 40-year history, works optimally. It requires Federal agencies with an extramural research and development budget of more than \$100 million to expend 3.2 percent with innovative small businesses. Federal agencies with an extramural research and development budget of more than \$1 billion are required to expend an additional .45 percent with innovative small businesses that partner with non-profit research institutions. This program structure means the SBIR and STTR programs do not require separate appropriations, and therefore, do not result in additional costs to the taxpayer.

The funding is provided in phases, with multiple layers of competition. Initially companies compete for a Phase I award, ranging from \$50,000 to \$275,000 to fund 6 to 12 months of proof-of-concept research. After completing Phase I, innovators compete for a Phase II award, ranging from \$400,000 to \$1.8 million for prototype development, completed over 12 to 24 months. The Phase I and Phase II SBIR or STTR award creates the opportunity for Phase III, non-SBIR/STTR funding for the government to acquire, transition, or further the development of the projects.

Last year, America's Seed Fund, through the 11 participating agencies, provided \$4 billion in non-dilutive funding across more than 7,000 awards—with winners in every state. These investments supported more than 4,000 innovative startups and small businesses, de-risking advanced technologies that address societal and national defense needs that go on to find commercial success. Importantly, over the last few years, nearly half (46%) of these firms are First-Time program winners. Bringing new entrants into the program, especially women, and socially or economically disadvantaged individuals, and individuals from underserved geographic areas, including our rural communities, has been a priority for SBA. Since I started this position, the percentage of new entrants has increased more than 30 percent.

Importance of Extending these Programs Today

For nearly 40 years, the SBIR and STTR programs have served as critical and needed innovation seed funding for US-based advanced technology firms. The programs have been studied, extensively. The National Academies of Sciences and Engineering and Medicine (NASEM) have completed over 20 studies and continue to document that these programs are highly competitive, and a critical tool used to convert American research into next-generation technologies. As mentioned previously, the program is designed in a way to not add to taxpayer costs, but instead, to increase competition within the federal research and development marketplace by leveraging the ingenuity of small high-tech companies.

When I think of these programs, I wholeheartedly believe that every proposal and award is an opportunity to enhance our national innovation competitiveness. That's why I thank the Committee, especially Chairwomen Velázquez and Ranking Member Luetkemeyer, for their support to ensure that the SBIR and STTR programs and current pilot initiatives are extended as-is, while the Committee continues its work on a fuller reauthorization.

Under current law, SBIR and STTR will expire at the end of September of this year. The time from a solicitation opening to the Phase I's being awarded spans between six and twelve months. My concern is that, if Congress does not extend the programs soon, agencies may start to delay new solicitations due to the potential that the SBIR and STTR program authority will expire. This would create a gap in new starts that cannot be made up.

Federal offices executing the programs will face inefficiencies but can also absorb the impact of the uncertainty and instability to some degree. The real burden will fall heavily on small business innovators, especially new program entrants.

I still recall the consternation and concern from small businesses and the bureaucratic challenges for agencies that resulted from the 14 short-term extensions to the programs between 2008 and 2011. Through an extension of the programs and legislated pilots months in advance of the authorization deadline, we can provide stability and certainty around America's Seed Fund and keep the focus on funding the most promising innovators to bolster American competitiveness while the Committee continues its important work on a broader reauthorization.

America's Seed Fund, throughout its 40-year history, has supported and contributed to entities like Qualcomm, Intuitive Surgical, Illumina, 23&Me, iRobot, and Sonicare. I am a strong advocate for these programs because I see how this funding supports our nation's people, enhances

our national defense capabilities, and supports the discovery of significant health innovations. Here are a few examples:

Attracting and Supporting the Brightest Innovators

Jennifer Doudna, Ph.D. and Rachel Haurwitz, Ph.D., co-founded Caribou Biosciences to commercialize the pioneering biopharmaceutical research in 2011. SBIR funding was a part of their journey when the company received two Phase I awards, one from the National Science Foundation (NSF) and one from the National Institutes of Health (NIH) in 2013. In 2020, Dr. Doudna was recognized with the award of the Nobel Prize in Chemistry. While the credit of this work is solely that of Dr. Doudna, and her collaborators – it is illustrative of the type of innovators the SBIR and STTR programs attract.

National Defense Capabilities

An often-overlooked benefit of the SBIR and STTR programs are their ability to provide innovative, cost-saving, capabilities for our national defense. One such example is the Navy's USS Virginia (SSN) Class attack-submarine. The Navy's Program Executive Office for Submarines strategically uses the SBIR and STTR programs as a tool for risk reduction, innovative technology insertion, and replacement of obsolete components, and, possibly most importantly, to establish competition where there was none. The Virginia Class submarine features nearly 40 different SBIR/STTR technologies representing more than \$1.5B in Phase III investments.

Propelling Societal Health

The National Academies of Science, Engineering, and Medicine recently completed an assessment of the SBIR and STTR programs within the National Institutes of Health (NIH) and documented that the SBIR and STTR programs supported the development of, "99 drugs between 1996-2020 — a total that includes 16 percent of all such treatments that made a 'significant' advance over other available treatments." To put these contributions in drug development in context, SBIR/STTR is less than four percent of NIH's extramural R&D budget and NIH R&D is just part of total U.S. spending on drug-related research, which is also funded by foundations, businesses, and other agencies.

While I often share that the Department of Defense found a 22:1 return on investment of its SBIR/STTR programs, I believe it's also helpful to think of these investments as tools to attract and support our brightest innovators, enhance our national defense, and generate societal benefits.

I thank you for this opportunity to appear before you today, and I look forward to working with the Committee as you reauthorize these important programs.



March 8, 2022

The Honorable Nydia Velázquez
Chairwoman
U.S. House Committee on Small Business
2361 Rayburn House Office Building
Washington, DC 20515

The Honorable Blaine Luetkemeyer
Ranking Member
U.S. House Committee on Small Business
2069 Rayburn House Office Building
Washington, DC 20515

Letter for the Record: House Committee on Small Business Hearing, "Overview of the Small Business Innovation Research and Small Business Technology Transfer Programs"

Dear Chairwoman Velázquez and Ranking Member Luetkemeyer,

The Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs are critically important for catalyzing entrepreneurial growth, enhancing competition, and boosting overall U.S. economic strength. Currently, these programs are set to expire at the end of fiscal year 2022.

These programs have historically enjoyed support from both parties and their continued reauthorization should be a bipartisan priority. The Bipartisan Policy Center is committed to working with all members on this Committee and the various federal agencies with oversight of the programs to ensure that they continue to improve in meeting their statutory goals and the needs of small businesses and entrepreneurs.

Importantly, reauthorization of SBIR/STTR should include important improvements that provide:

- More flexibility and faster timelines,
- Better metrics and more transparent data on program performance, and
- Greater diversity in award recipients, both demographically and geographically.

It is difficult to generalize about SBIR/STTR as each federal agency structures and administers their program slightly differently. Some agencies, such as the National Science Foundation and Department of Energy, have been held up as models for other agencies to emulate. The Small Business Administration (SBA), which plays an oversight—not implementation—role, should be empowered, where possible, to help agencies institute improvements and adopt best practices identified at high-performing agencies.

More Flexibility and Faster Timelines

As a general matter, there is room for improvement in how quickly federal agencies issue SBIR/STTR awards. In an October 2021 report, the Government Accountability Office (GAO) found that “only nine of the 29 participating agencies were consistently on time in fiscal year 2020.”^[1] Being “on time” means issuing at least 90 percent of awards within 180 days. Some agencies are much faster and able to make their awards within 90 days.

Time is one of the most precious resources for an entrepreneur and her small business. A 90-day, or three-month, difference in receiving an SBIR award can be the difference between closure or continuation of a business.

Better Metrics and More Transparent Data

It’s presently quite difficult to conduct any sort of performance analysis of SBIR/STTR. A BPC report on the programs in March 2021 observed: “Current metrics for the SBIR/STTR programs focus on reporting efficiency and agency spending requirements of agencies. However, no specific metrics have been developed to measure program performance relative to program goals.”^[2]

Put another way, programs intended to promote commercialization by entrepreneurial companies do not measure themselves by that objective. Good stories abound about successful SBIR recipients. Yet program performance is measured solely by the total dollar amount of awards and the timeline of their issuance. For example, metrics should be established that gauge the “commercial success or federal use of technologies developed by SBIR/STTR awardees.”^[3]

Greater Diversity in Award Recipients, Both Demographically and Geographically

U.S. economic competitiveness will erode if participation in the American innovation pipeline is not as broad as possible. SBIR and STTR are key components of that. A goal of these programs is encouraging innovation and entrepreneurship among individuals with historically low rates of participation, especially women and those from socioeconomically disadvantaged backgrounds.

¹ Government Accountability Office, “Small Business Research Programs: Agencies Should Further Improve Award Timelines,” October 2021, available at: <https://www.gao.gov/assets/gao-22-104677.pdf>.

² Jasmine Bridges, “Turbocharging Small Business Innovation,” Bipartisan Policy Center, March 2021, available at: <https://bipartisanpolicy.org/report/turbocharging-small-business/>.

³ Jasmine Bridges, “Turbocharging Small Business Innovation,” Bipartisan Policy Center, March 2021, available at: <https://bipartisanpolicy.org/report/turbocharging-small-business/>.

Congress and federal agencies should seek ways to ensure that all American entrepreneurs have access to SBIR/STTR awards. Having a network that provides connections to knowledgeable people and helpful resources is crucial for entrepreneurs' success. Working with the SBA, federal SBIR/STTR program managers should seek ways to expand these networks, particularly for entrepreneurs from socioeconomically disadvantaged backgrounds who may have fewer relevant connections. Doing so can broaden and diversify the pipeline of award applicants and recipients.

Similarly, the government should work to ensure that all regions of the country benefit from the SBIR/STTR programs. For too long, new business creation, innovation, and venture investing have been concentrated in a handful of metro areas. The SBIR/STTR programs can be key tools in geographically expanding American innovation and prosperity. Dedicated partnerships with a broader group of universities and entrepreneurship support organizations, for example, could help widen geographic representation.

This Committee hearing, focused solely on the SBIR/STTR programs and their future, will help highlight the positive nature of these programs and the critical reforms needed to improve them. The Bipartisan Policy Center encourages members of both parties in Congress, as well as the executive branch agencies charged with administering SBIR/STTR, to continue seeking common ground as reauthorization discussions progress.

Thank you for hosting this important hearing and allowing BPC the opportunity to comment.

Sincerely,

Dane Stangler
Director, Strategic Initiatives
Bipartisan Policy Center

February 2, 2022

The Honorable Chuck Schumer
Majority Leader
United States Senate
Washington, DC 20510

The Honorable Mitch McConnell
Minority Leader
United States Senate
Washington, DC 20510

The Honorable Nancy Pelosi
Speaker of the House of Representatives
United States Capitol Building
Washington, DC 20515

The Honorable Kevin McCarthy
Minority Leader
United States House of Representatives
Washington, DC 20515

Congressional Leaders:

We, the undersigned organizations, are writing to urge you to pass an extension of the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs on an upcoming legislative vehicle that will be enacted soon.

The SBIR/STTR programs are currently set to expire on September 30, 2022. While we support a full reauthorization through regular order, the calendar realities in Congress this year and lack of legislative vehicles available prior to the termination date mean that it is a very real possibility that these programs could expire before a full reauthorization can be passed.

That would be a crushing blow to American innovation and undermine small business job creation during our nation's economic recovery. The SBIR/STTR programs, established in 1982, have a proven track record. As of 2019, the programs have provided over 179,000 awards, totaling more than \$54.3 billion, to U.S. small businesses. A Defense Department assessment showed the SBIR/STTR programs have generated a 22:1 return for every federal dollar spent, and a study by the National Academy of Sciences found a commercialization rate of between 50-60% for SBIR/STTR investments—a win-win for the U.S. economy and taxpayer.

SBIR and STTR are an essential part of America's innovative high-tech ecosystem, and even the threat of a short-term disruption of these programs—like what the programs underwent back in 2008-2011—could have a severe effect on R&D-focused small businesses. Federal agencies could also see their research and technology development stalled by a disruption in these programs. Both small businesses and the agencies need certainty, stability, and predictability to budget and plan for the future—especially as the nation works to emerge from the COVID-19 pandemic.

With this in mind, we respectfully request that you include an extension of the SBIR/STTR programs, including related pilot authorities, in an upcoming legislative vehicle, such as an upcoming government funding bill. This extension will give Congress the time it needs to develop and pass a comprehensive reauthorization bill for SBIR and STTR, one that includes needed changes and improvements. It will also give both small businesses and federal agencies the certainty that these vital programs will not expire or be disrupted.

Thank you for your consideration.

*Cc: U.S. Senate Committee on Small Business and Entrepreneurship; U.S. House Committee on Small Business;
U.S. House Committee on Science, Space and Technology*

Angel Capital Association
 Association of University Research Parks
 BBC Entrepreneurial Training and Consulting
 Facility Logix
 National Defense Industrial Association
 NextGen Chamber of Commerce
 Innosphere Ventures
 Invent Together
 Lakeview Consulting, Inc.
 National Association for the Self-Employed
 National Defense Industrial Association (NDIA)
 National Small Business Association
 Small Business & Entrepreneurship Council
 Small Business Majority
 Small Business Technology Council
 SSTI
 U.S. Chamber of Commerce
 United States Hispanic Chamber of Commerce
 US Ignite
 Waymaker Group

Alabama
 University of South Alabama

Arizona
 Arizona Bioindustry Association, Inc. (AZBio)
 Arizona Commerce Authority
 Arizona SBDC
 Arizona Small Business Association
 Arizona Technology Council

Arkansas
 Arkansas Research Alliance
 Science Venture Studio
 Startup Junkie Consulting, LLC
 Startup Junkie Foundation

California
 Blended Impact
 Oak Crest Institute of Science

Connecticut
 CTNext
 Innovation to Impact

Delaware
 Delaware Innovation Space
 Delaware Prosperity Partnership

District of Columbia
 Incubate

Florida
 Florida High Tech Corridor
 University of Central Florida Business Incubation
 Program

Georgia
 Emory University
 Enterprise Innovation Institute

Hawaii
 Hawaii Technology Development Corporation

Illinois
 Illinois Science and Technology Coalition

Iowa
 BioConnect Iowa

Kansas
 Enterprise Center in Johnson County
 K-State Innovation Partners

Kentucky
 University of Louisville

Louisiana
 Louisiana Tech University
 New Orleans BioInnovation Center Inc.
 New Orleans Business Alliance
 NexusLA

Maryland
 BioHealth Innovation
 Maryland Technology Development Corporation
 (TEDCO)
 Montgomery County Economic Development
 Corporation (MCEDC)

Massachusetts
 Massachusetts Technology Development Corp
 New England Innovation Alliance

Michigan
 Applied Medical Device Institute
 Economic Development Alliance of St. Clair
 County
 Michigan Business Innovation Association
 Michigan Economic Development Corporation
 TechTown Detroit
 WMed Innovation Center/Kalamazoo SmartZone

Minnesota
 MNSBIR, Inc.

Mississippi

Innovate Mississippi

Missouri

BioSTL

Donald Danforth Plant Science Center

Missouri State University

Missouri Technology Corporation

University of Missouri

Nebraska

Invest Nebraska

Nevada

Nevada Governor's Office of Economic
Development

New Mexico

Arrowhead Center at NMSU

OneTen Capital

New York

Center for Biotechnology, Stony Brook University

Rochester Institute of Technology

Weill Cornell

North Carolina

Contraceptive Accelerator Network

The Launch Place

Ohio

Greater Cleveland Partnership

Innovation Works

JumpStart Inc.

Rev1 Ventures

The Council of Smaller Enterprises (COSE)

Oklahoma

Cowboy Technologies, LLC

i2E, Inc.

Oklahoma Center for Advancement of Science &
Technology

Oklahoma Manufacturing Alliance

University of Oklahoma

Oregon

Oregon Nanoscience and Microtechnologies

Institute

VertueLab

Pennsylvania

Ben Franklin Technology Partners

Pennsylvania Department of Community &
Economic Development

University City Science Center

University of Pittsburgh

South Carolina

South Carolina Research Authority

South Dakota

South Dakota SBDC

Tennessee

AgLaunch

Epicenter Memphis

Launch Tennessee

The Company Lab

Texas

Texas Foundation for Innovative Communities

Texas State University

Utah

University of Utah

Utah Innovation Center

Vermont

Vermont Department of Economic Development

Vermont Sustainable Jobs Fund

Virginia

George Mason University

Valleys Innovation Council

Virginia Innovation Partnership Corporation

Virginia Tech

Washington

University of Washington, CoMotion

West Virginia

West Virginia Jobs Investment Trust

West Virginia University

Wisconsin

BioForward Wisconsin

Center for Technology Commercialization

The Water Council

University of Wisconsin-Platteville

Questions for the Record

March 8, 2022

Hearing: “Overview of the Small Business Innovation Research and Small Business Technology Transfer Programs”

Questions for the Record from Rep. Nydia M. Velázquez, Chairwoman of the Small Business Committee

- Before you testified, to prevent the threat of a shutdown, I worked with the House Science Committee to win an amendment to provide a clean five-year extension of the programs and pilots in a bi-partisan amendment package to the COMPETES Act. Since you testified, the threat of a lapse has grown. Does the threat of a lapse in the programs adversely impact the agencies and small businesses? (yes/no, please explain).

Yes. The SBIR/STTR solicitation processes begin months prior to public release. Agencies have already begun reassessing the reasonableness of moving forward with solicitations given the fear of a lapse. The odds of these opportunities being delayed, not pursued, or rescinded, continually increase the closer we get to September 30, 2022.

- During the hearing, we discussed whether the staff and budget for the Office of Innovation and Technology (OIT) have kept pace with the growth of the SBIR and STTR programs over the years. For FY22, what is OIT’s budget, the number of full-time permanent staff, the award numbers and dollars for the SBIR and STTR programs, and how many other programs and mandates does OIT carry out? How do the resources, program sizes, and mandates compare to FY2012?

	Fiscal Year 2022	Fiscal Year 2012
OIT’s Budget	\$1,200,000	\$500,000
# Full-time Permanent Staff	4 filled, 4 vacant	4 filled
# of SBIR/STTR Awards	~7,000*	5,639
Sum of SBIR/STTR Award Funding	~\$3.9 billion*	\$2.27 billion
Other Programs	Federal and State Technology Partnership Program (FAST; FY22 \$6M) and Growth Acceleration Fund Competition (GAFC; FY22 \$3M)	Federal and State Technology Partnership Program (FAST; FY12 \$2M)

*FY22 awards and funding estimates are based on adjusting the average of FY20 and FY21 outcomes based on FY22 budgets.

- During the last Administration, did OIT's resources and independence increase or decrease, and were OIT funds used for SBIC-related expenses? Please explain.

OIT staffing and budget has fluctuated over the years. Please find a table below with OIT's staffing and direct funding between FY16 and FY22.

Fiscal Year	SBA Funding to Office of Innovation	Full-Time Permanent Staff		Notes
		Start of FY	End of FY	
2016	\$1,000,000	7	5	8 assigned FTE billets, 1 SES, 1 GS-15, 3 GS-14s, 2 GS-12s, 1 vacant. 2 employees, 1 GS-14 and 1 GS-1 left.
2017	\$250,000	5	4	1 GS-14 billet move to SBIC bringing assigned FTEs down to 7. 1 SES, 1 GS-15, 2 GS-14s. 1 GS-12 left. Does not include \$1,040,000 in end-of-year sweep up funds.
2018	\$750,000	4	4	7 assigned FTE billets, 1 SES, 1 GS-15, 2 GS-14's. 1 GS-14 detailed to OSTP, 1 GS-12 was hired. Does not include \$1,130,000 in end-of-year sweep up funds.
2019	\$750,000	4	2	6 assigned FTE billets, 1 was removed. 1 SES, 1 GS-15, 1 GS-14, 1 GS-12. GS-14 detailed full year to OSTP, GS-15 retired, GS-12 left, leaving SES and 1 GS-14 for last 6 months of the FY.

Fiscal Year	SBA Funding to Office of Innovation	Full-Time Permanent Staff		Notes
		Start of FY	End of FY	
2020	\$1,150,000	2	4	6 assigned FTE billets, 1 SES, 1 GS-14, 1 GS-14 returned from OSTP, 1 GS-12 hired.
2021	\$1,145,390	4	6	6 assigned FTE billets, 1 SES, 1 GS-15, 3 GS-14 (2 hired), 1 GS-12. Does not include \$500,000 one-time Working Capital Fund investment for SBIR.gov.
2022	\$1,352,963	6	4	6 assigned FTE billets, 1 SES, 1 GS-15, 3 GS-14s, 1 GS-12. The 1 GS-15 was reassigned, 1 GS-14 left but 2 new GS-14 and 1 GS-13 billets added. Currently at 8 assigned FTE billets as 3 hiring actions are in progress.

- Agencies are required to the greatest extent possible to make Phase III follow-on contracts for SBIR/STTR awards that extend from or are derived from their SBIR/STTR technologies. Under the “Special acquisition requirement” of the Policy Directive, SBA lays out the process for follow-on Phase III contracts as required in the Small Business Act. It says:

“(iii) Other Preference. If pursuing Phase III work with the Awardee on a sole source/non-competitive basis does not meet the requirements set forth in the above sections regarding availability, practicality and capability, the Agency must document the file and provide a copy of the decision, including the rationale, to the SBA.”

How often do agencies comply with this law and policy directive?

Follow-up: SBA is given five to ten days to appeal an agency’s conclusion that an SBIR/STTR firm should not get a follow-on contract. Is that sufficient time, and do agencies cooperate when SBA issues a “suspension of work” on contested solicitations and contracts? Please explain.

SBA continues to engage with agencies on the requirement in the Policy Directive to provide SBA with a copy of the decision and rationale for why it was not practical to issue a phase III award to the company that developed the technology under an SBIR/STTR award. Within the last 5 years, based on our records, SBA has not received any notifications of agency decisions or rationales for pursuing a Phase III award with a firm that did not develop the technology under an SBIR/STTR award. There have been occasions when small businesses have reached out to SBA, because they believe a solicitation or other requirement should be designated as a Phase III. However, if agencies assess the solicitation or requirements differently, the notification is not triggered.

- Do the agencies or the SBA track the demographic and geographic representation of SBIR/STTR applicants (winners and non-winners) and application assistance? What exactly is collected on the SBIR/STTR applications and by the agencies and technical assistance providers that provide application assistance? What does SBA collect for 7(a) applicants? What does HHS/NIH collect for RO1 applications?

The agencies, as recipients of the proposals, collect geographic and certain demographic items as a component of applications. Per 15 U.S.C. 638(g)(8) agencies track if the applicant firm is owned by a woman or has a woman as a principal investigator, is owned by a socially or economically disadvantaged individual or has a socially or economically disadvantaged individual as a principal investigator, and if the applicant is located in a HUBZone.

For the 7(a) program SBA collects voluntary disclosure of veteran status, gender, race (i.e., American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Pacific Islander, White) and ethnicity (i.e., Hispanic or Latino, Not Hispanic or Latino).

Any specific data collection by technical assistance providers would be at the purview of the funding agency. HHS/NIH is best positioned to address its collection on RO1 applications.

- What are the pros and cons of allowing Discretionary Technical and Business Assistance (TABAs) to be used by SBIR/STTR winners to cover the costs of in-house employees, and would it help increase commercialization (sales, patents, papers, tech insertion, spin-offs, etc.)?
Follow-up: Could in-house TABAs be useful in circumstances in which the cost covers training for an employee rather than subsidizing their salary?

Some agencies have expressed concerns regarding potential abuse of utilizing TABAs for in-house employees, for example it could be used as a mechanism to circumvent award limits and would be difficult to ensure the funding is used in support of allowable services and create challenges to the task of monitoring for fraud, waste and abuse.

The National Academies of Sciences, in its 2020 Report on the Department of Energy, made a recommendation for Congress to consider allowing firms to use commercialization assistance to hire in-house marketing and business expertise. Certain agencies have also expressed an interest in allowing TABAs to support employee training.

Questions for the Record from Rep. Blaine Luetkemeyer (MO-03)

- Can you speak to the requirements, if any, of providing feedback to SBIR and STTR applicants when their applications are denied?

Consistent with Federal acquisition policies, contracting agencies may provide a mechanism for feedback if the application is not selected for award. This mechanism may require the applicant to request the feedback within a certain timeframe post notification of non-selection, and in other cases agencies may voluntarily generate and share feedback as a component of its process.

- Does each agency have its own appeal process or is there one standardized process across all agencies?

Contracting agencies follow the Federal Acquisition Regulations (FAR) which outlines the process for protesting the procurement process. Applicants to contracting agencies may protest directly to the agency, the Government Accountability Office (GAO), or may file a bid protest at the Court of Federal Claims.

- In 2011, Congress made changes to the programs to better address waste, fraud, and abuse. Are agencies implementing these requirements? What more can Congress do to combat fraud and abuse?

Preventing Fraud, Waste, and Abuse (FWA) remains a key priority, it is a standing component of our recurring monthly meetings with participating agencies, and SBA tracks agencies' implementation of several FWA prevention measures. Agencies are largely implementing these measures, but not fully. Given the stringent competitive nature of the SBIR/STTR programs and oversight efforts funded under the Administrative Funding pilot program, the incidence of FWA remains very low.

- During the hearing, you agreed that having some standardized templates might be beneficial to small businesses. What would an ideal standardized template look like to the SBA?

SBA fully supports mechanisms to reduce burden in the application process. We believe that simplification and streamlining, where possible, can increase the number of applications, as well as enable participating agencies to capture more market information on U.S. invention and innovation. We see opportunities to evaluate the participating agencies guidelines and, where possible, harmonizing processes to improve the 'customer experience'.

- In a recent SBA report, ten states received the majority of SBIR and STTR awards. These are mostly costal states and big cities. Why do you believe businesses located in certain

areas of the country have utilized and been successful in the program compared to other areas?

America's Seed Fund (SBIR/STTR programs) has been successfully leveraged by entrepreneurs and innovators across all states. Some of the more populated states, and states in regions and communities with significant innovation infrastructure have submitted greater numbers of proposals relative to other states. Programs like the Federal and State Technology (FAST) Partnership and the Growth Accelerator Fund Competition (GAFC) make significant contributions in supporting historically underutilized regions, communities, and states so they help entrepreneurs gain access to SBIR and STTR funding through outreach, technical and business assistance, and proposal or application support.

The President's FY 2023 Budget request includes \$10 million for FAST and \$10 million for GAFC. This request acknowledges that more can be done to improve upon the current level of success and FAST and GAFC are critical components to our strategy to help achieve greater geographic distribution of awards and more diverse participation.

- How does the FAST program differ from the original SBDC model of outreach and counseling?

These programs are complementary and collectively represent an ALL-OF-SBA commitment to helping high-growth innovative small businesses participate in federal research and development with a focus on commercialization. The SBDC program is well suited to support a variety of companies to grow, expand, and find additional capital through their outreach and counseling. However, not all SBDCs specialize in the types of services requested by small companies engaged in research and development. FAST complements the activities provided by SBDCs by funding organizations that specialize in understanding the unique needs of high-growth innovative companies, specifically those in rural or underserved communities. FAST awardees address unique customer discovery, technology transfer, intellectual property challenges, and assist tech startups in the application process for federal research and development funding. Several SBDCs have successfully partnered with FAST awardees while others are able to refer innovators to the FAST recipients within their state to provide this complementary support.

- Can you justify what the FAST program does that is essential and completely different than what SBDC's already do?

FAST represents a tailored investment focus to ensure underserved states and communities can effectively gain access to America's Seed Fund. The 24 FY 2021 FAST awardees provided proposal writing assistance to over 1,400 individuals. FAST clients submitted 489 Phase I proposals and 98 Phase II proposals, resulting in a Phase I win rate of 34% compared to an overall program average of 15%, and 61% for the 98 Phase II proposals were successful—also a higher-than-average percentage. These Phase I and II

awards equate to more than \$85M in funding from what was a \$3M FAST investment for a 28 to 1 ROI.

- Why is Phase III data not available on the SBIR.gov website? Is it possible to add Phase III to the drop-down choices? If yes, when can we expect the website to be updated?

Currently, the best federal source of government designated Phase III funding is the System for Award Management (sam.gov), as it allows contracting officers to designate contracts as such. There is substantial private sector commercialization which also constitutes Phase III; however, that data is often proprietary and not easily accessible or publishable.

SBA is supportive of providing timely, accurate, and transparent data and includes reporting of government designated Phase III funding within the annual reports. SBA will assess the feasibility of leveraging FPDS to provide data on Phase III awards within SBIR.gov.

- Afwerx, a United States Air Force program, has continued to issue multiple “jumbo” sized SBIR awards (awards larger than the \$1.5 million award limit allowed in the law) using waivers issue by the SBA. These jumbo Phase II awards are going to firms that are entirely venture capital supported and largely located in Massachusetts and California. Can you explain why the SBA continues to grant waivers to these firms?

- Please provide the analysis the SBA used to reach the decision to give out each waiver in FY20.

The AFWERX above-the-guideline waivers are rare, covering 3% of the FY20 Air Force awards. They were submitted as part of the AFWERX Strategic Funding Increase and Tactical Funding Increase Program (STRATFI/TACFI) to address high priority Air Force needs while featuring a significant non-SBIR/STTR funding match – often a minimum of \$3 non-SBIR/STTR for every \$1 of SBIR/STTR funding.

SBA reviewed the waiver requests based on the factors required by the statute and the Policy Directive. Further, SBA recognized that the significant match requirement was not part of the base competitive Phase II process, but done as a second or modified Phase II award meaning the presence of, or lack of, matching funding did not impact the initial Phase II selection process which is consistent with statute and the Policy Directive.

The underlying selection of individual awardees and the process of determining which topics require an above-the-guideline waiver request is entirely at the discretion of the awarding agency.

- In your testimony, you mentioned the percentage of new entrants has increased to 46 percent in the last few years. However, this means that 54 percent of program participants are repeat customers. Do you believe SBIR and STTR programs should consider firm age or growth-oriented small firms in the application process?

SBA is committed to ensuring new small firms can enter the research and development space through SBIR and STTR programs which is why we are proud that the percentage of new entrants reached 46% this past year, up from 35% in 2015 when I joined SBA. We will continue to make improvements to ensure more new small businesses can participate in SBIR/STTR.

As we continue to deliver on our commitment to bring additional new small businesses into the SBIR and STTR programs, it will remain important that agencies retain the appropriate flexibility to meet mission needs. Limiting SBIR/STTR participation, based on past successes, would negatively impact many small businesses, as well as agencies' ability to leverage cutting edge technologies and maintain their competitive advantage. During my time at the Navy, we were primarily driven by funding the most innovative projects with the strongest opportunity to address our Naval capability gaps and move the progression of innovation forward. While we maintained a significant focus on commercialization and transition, we also applied the other statutory program purposes: (1) to stimulate technological innovation; and (2) to use small business to meet Federal research and development needs. Therefore, I believe it is important to provide agencies the flexibility to fund the innovators with the best technical solutions.

Again, nearly half of award winners are new to the program annually, and we will continue to work with agencies and directly with states and local resource partners to ensure the opportunity is widely available to all innovative small businesses.

Questions for the Record from Rep. Scott Fitzgerald (WI-05)

- The Fiscal Year 2022 NDAA extended the pilot program for streamlining awards for innovative technology projects, such as awards under the SBIR program, until 2024 (P.L. 117-81, Section 862). Under the pilot program, any contract or subcontract valued at less than \$7.5 million is exempt from certain cost or pricing data disclosures. As this committee conducts its due diligence before voting to extend the SBIR and STTR programs, there have been calls for better metrics and more transparent performance data so this committee, and the general public, can better gauge the commercial success, or federal use, of technologies developed under the SBIR and STTR programs. Do you believe exempting these awardees from cost and records disclosure obstructs our ability to gauge the success of these programs?

SBIR and STTR Phase I and Phase II awards require a cost proposal and budget and are guided by maximum award amounts, and agencies generate topics with an understanding of the level of anticipated development achievable given the maximum award amounts. SBA is not a direct party to the subject pilot and does not have data on the pilot's level of implementation or effectiveness.

- Congress continues to place an emphasis on federal subsidies to promote U.S. research, development, and manufacturing of semiconductors. The most recent example being the passage of the America COMPETES Act, which contains over \$50 billion in appropriations towards semiconductor R&D. What role do you see the SBIR and STTR programs playing in the domestic production of semiconductors?

The SBIR and STTR programs provide significant strengths in that the research and development within a project occurs within the United States, the companies are required to be owned by citizens or resident aliens, and through the competitive program it attracts some of our nation's brightest innovators. Agencies have, and will continue to use SBIR and STTR to address domestic production of semiconductors through investments in research and development of new designs, materials, and manufacturing systems, across multiple technical domains. Multiple participating agencies fund research topics through the SBIR and STTR programs related to semiconductors, including the Department of Defense, National Science Foundation, Department of Energy, the National Aeronautics and Space Administration, and Department of Homeland Security.

Questions for the Record from Rep. Beth Van Duyne (TX-24)

- The latest data I've seen shows six civilian agencies failed to comply with minimum spending requirements. Can you explain the current compliance situation with participating agencies meeting statutory spending requirements?
 - What happens when it is determined an agency didn't meet their requirement – How are we ensuring enforcement?

SBA assesses compliance through two measures: 1) by determining the percentage of funding obligated for SBIR/STTR activities divided by total extramural R/R&D obligation minus program exemptions reported to SBA, and 2) by determining the percentage of funding obligated for SBIR/STTR activities based on the total extramural R/R&D obligations reported by the Agency for the NSF National Center for Science and Engineering Statistics (NCSES) Survey minus the amount of program exemptions reported to SBA. When agencies are deemed non-compliant based on SBA's assessment, we identify them within the Annual Report and include a narrative from the agency on why it's not compliant. Although SBA does not have any further enforcement authority, we have experienced increased engagement and collaboration with agencies around compliance.

Per the most recently published FY19 SBIR and STTR Annual Report the following agencies and DOD components were not compliant based on SBA's assessment:

- NASA (SBIR & STTR)
- USDA (SBIR)
- DOC (SBIR)
- EPA (SBIR)
- DoD Components
 - Air Force (SBIR & STTR)
 - Army (SBIR & STTR)
 - MDA (SBIR & STTR)
 - DHA (SBIR)
 - CBD (SBIR & STTR)
 - SOCOM (SBIR)
 - DTRA (STTR)
 - OSD (SBIR & STTR)