

United States Government Accountability Office Report to Congressional Committees

April 2017

# SMALL BUSINESS RESEARCH PROGRAMS

Additional Actions Needed to Implement Fraud, Waste, and Abuse Prevention Requirements



Highlights of GAO-17-337, a report to congressional committees

### Why GAO Did This Study

For about 35 years, federal agencies have made awards to small businesses for technology research and development through the SBIR program and, for the last 25 years, through the STTR program. Following a 2009 congressional hearing about fraud in the programs, the SBIR/STTR Reauthorization Act of 2011 included separate requirements for SBA and OIGs to address and prevent fraud, waste, and abuse.

The act also included a provision for GAO to review what the agencies and their OIGs have done to address fraud, waste, and abuse in the programs. This report examines (1) the extent to which SBA and the participating agencies have implemented measures to prevent fraud, waste, and abuse for the SBIR and STTR programs and (2) the extent to which the agencies' OIGs have implemented the act's requirements.

GAO compared documentation from SBA, the 11 participating agencies, and the agencies' OIGs to their respective requirements and interviewed SBA, agency, and OIG officials.

### What GAO Recommends

GAO is making six recommendations, including that SBA confirm agency implementation of the fraud, waste, and abuse requirements, and that the Army, Navy, and Air Force OIGs implement the OIG requirements or delegate them to the investigative services. These agencies generally agreed with the recommendations addressed to them.

View GAO-17-337. For more information, contact John Neumann at (202) 512-3841 or neumannj@gao.gov.

# SMALL BUSINESS RESEARCH PROGRAMS

# Additional Actions Needed to Implement Fraud, Waste, and Abuse Prevention Requirements

### What GAO Found

The 11 agencies participating in the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs have varied in their implementation of the fraud, waste, and abuse prevention requirements developed by the Small Business Administration (SBA) after the programs were reauthorized in 2011. SBA, which oversees the programs, amended the SBIR and STTR policy directives in 2012, as required by the reauthorization act, to include 10 minimum requirements to help agencies prevent potential fraud, waste, and abuse in the programs. GAO found that the extent to which the agencies have fully implemented each of the requirements in the directives varies. For example, all 11 agencies have fully implemented 2 requirements, more than half of the agencies have fully implemented 6 other requirements, and 1 and 3 agencies, respectively, have fully implemented the remaining 2 requirements. Officials from 9 agencies told GAO they have implemented other activities beyond the minimum requirements included in the directives, such as conducting site visits to small businesses to confirm that the necessary facilities exist for technical research and development work. Although SBA issued the policy directives, it has taken few actions to oversee agencies' efforts to implement the requirements. SBA officials said they checked on the implementation of one of the requirements, but did not know whether the participating agencies were implementing the other requirements because they had not confirmed this information. Without confirming that each participating agency is implementing the fraud, waste, and abuse prevention requirements in the policy directives, SBA does not have reasonable assurance that each agency has a system in place to reduce its' vulnerability to fraud, waste, and abuse.

Similarly, Offices of Inspectors General (OIG) varied in their implementation of the fraud, waste, and abuse prevention requirements specifically assigned to them in the reauthorization act, with between 5 and 11 OIGs implementing each requirement. For example, OIGs at each of the 11 agencies have shared information on fraud, waste, and abuse. Of the 11 participating agencies, the Department of Defense (DOD) is the only one whose oversight and audit responsibilities are separated between its various OIGs and specific investigative services, so that DOD has both an OIG as well as an investigative service as do each of the military services. By law, the OIGs of each military service within DOD—Army, Navy, and Air Force—are each required to implement these requirements. However, GAO found that none of the three military service OIGs had taken actions to implement the requirements, although the DOD OIG had taken some steps to implement them. The division of duties between the military services' OIGs and their respective investigative services makes it difficult to track the implementation of these requirements at DOD. Without the three military services' OIGs implementing the requirements themselves or delegating the implementation of the requirements to the investigative services, the DOD OIGs may not be able to detect fraud, waste, and abuse in DOD's SBIR and STTR programs, which have the largest budgets for these programs.

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#### Abbreviations

Commerce	Department of Commerce
DHS	Department of Homeland Security
DOD	Department of Defense
DOE	Department of Energy
DOT	Department of Transportation
Education	Department of Education
EPA	Environmental Protection Agency
HHS	Department of Health and Human Services
NASA	National Aeronautics and Space Administration
NSF	National Science Foundation
OIG	Office of Inspector General
R&D	research or research and development
SBA	Small Business Administration
SBIR	Small Business Innovation Research
STTR	Small Business Technology Transfer
USDA	Department of Agriculture

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U.S. GOVERNMENT ACCOUNTABILITY OFFICE

441 G St. N.W. Washington, DC 20548

April 25, 2017

**Congressional Committees** 

For about 35 years, federal agencies have made awards to small businesses for technology research or research and development (R&D) through the Small Business Innovation Research (SBIR) program and, for the last 25, through the Small Business Technology Transfer (STTR) program. Federal agencies have awarded an average of about \$2 billion a year through these programs and a total of more than \$40 billion for 150,000 contracts and grants since their inception in 1982 and 1992, respectively. In recent years, several agencies' Offices of Inspectors General (OIG) have investigated and referred for prosecution several cases of fraud, waste, or abuse in the SBIR and STTR programs. From January 2010 through December 2016, the OIGs reported that they initiated about 110 SBIR or STTR investigations, including at least 45 investigations that involved multiple agencies. As of December 2016, these investigations have resulted in 14 guilty verdicts or pleas; more than \$31 million in criminal restitution, civil settlements, or termination of funding of SBIR or STTR awards; and the suspension or debarment of 40 individuals or companies from participation in the programs.<sup>1</sup> Over the same period, federal agencies made about 38,000 SBIR or STTR awards to small businesses.<sup>2</sup>

SBIR and STTR awards have supported the development and commercialization of innovative technologies. For example, one company received seven SBIR or STTR awards totaling \$4.4 million to develop new spacecraft systems and enabling technologies. Another company received about \$660,000 for an SBIR award to develop a diagnostic tool for Zika virus infection. Eleven federal agencies currently participate in the SBIR program: the Departments of Agriculture (USDA), Commerce,

<sup>1</sup>The suspension and debarment process helps protect the federal government from fraud, waste, and abuse by using a number of tools to avoid doing business with nonresponsible contractors. "Suspension" means action taken to disqualify a contractor temporarily from government contracting and government-approved subcontracting. "Debarment" means action taken to exclude a contractor from government contracting and government-approved subcontracting for a reasonable, specified period.

<sup>2</sup>Agencies report their SBIR and STTR awards data on a rolling basis and data are not complete until several months after the end of the fiscal year. According to Small Business Administration (SBA) data, agencies made 34,698 awards through fiscal year 2015 and, as of January 2017, agencies had reported 3,439 awards in fiscal year 2016.

Defense (DOD), Education, Energy (DOE), Health and Human Services (HHS), Homeland Security (DHS), and Transportation (DOT); the Environmental Protection Agency (EPA); the National Aeronautics and Space Administration (NASA); and the National Science Foundation (NSF). Five of these agencies also participate in the STTR program: DOD, DOE, HHS, NASA, and NSF. Each participating agency is to manage its SBIR and STTR programs in accordance with program laws and regulations and the policy directives issued by the Small Business Administration (SBA), which oversees the two programs.

Both programs were reauthorized in 2011. Under the SBIR/STTR Reauthorization Act of 2011 (reauthorization act),<sup>3</sup> SBA was to amend the SBIR and STTR policy directives to include requirements for participating agencies to prevent fraud, waste, and abuse in the SBIR and STTR programs. The Small Business Act requires agencies to follow the policy directives.<sup>4</sup> According to the policy directives, potential fraud, waste, and abuse in the programs includes, among other activities, misrepresenting how funds were used under an award, misusing award funds, falsifying reporting results from an award, and extravagant or needless spending of an award.<sup>5</sup> The reauthorization act also included several requirements for participating agencies' OIGs to address SBIR and STTR fraud, waste, and abuse.

The reauthorization act includes a provision for GAO to review what the agencies and agency OIGs are doing to prevent, identify, respond to, and reduce fraud, waste, and abuse in the SBIR and STTR programs, every 4 years.<sup>6</sup> We last issued a report on these issues in November 2012.<sup>7</sup> This report examines the extent to which (1) participating agencies and SBA have implemented measures to prevent fraud, waste, and abuse for the SBIR and STTR programs and (2) OIGs have implemented fraud, waste, and abuse prevention requirements for the SBIR and STTR programs.

<sup>3</sup>SBIR/STTR Reauthorization Act of 2011, Pub. L. No. 112-81, div. E, tit. LI, § 5143, 125 Stat. 1298, 1854 (codified at 15 U.S.C. § 638b (2017)).

<sup>4</sup>15 U.S.C. §§ 638(f)(1) and (n)(1)(A) (2017).

<sup>5</sup>Small Business Administration, *Small Business Innovation Research (SBIR) Program Policy Directive* (Washington, D.C.: Feb. 24, 2014), and *Small Business Technology Transfer (STTR) Program Policy Directive* (Washington, D.C.: Feb. 24, 2014).

<sup>6</sup>SBIR/STTR Reauthorization Act of 2011 § 5143(b).

<sup>7</sup>GAO, Small Business Research Programs: Agencies Are Implementing New Fraud, Waste, and Abuse Requirements, GAO-13-70R (Washington, D.C.: Nov. 15, 2012).

To address our first objective, we requested and reviewed documentation, such as guidance and procedures, from each of the participating agencies and compared that documentation to the requirements in the SBIR and STTR policy directives. We assessed agencies' implementation of the requirements but not the effectiveness of their implementation. We determined that an agency had fully implemented a requirement if an agency could demonstrate, through interviews with agency officials and documentation provided by them, as appropriate, that it had fully implemented each part of the requirement. We determined that the agency partially implemented a requirement if an agency could demonstrate, through interviews with agency officials and documentation provided by them, as appropriate, that it had implemented at least one part of the requirement. We determined that the agency had not implemented the requirement if it could not provide evidence for implementing any part of that requirement. We limited our review of DOD and HHS to the components that spent more than \$100 million on SBIR and STTR programs in fiscal year 2014, the most recent year for which data were available at the start of our review. As such, we limited our review of DOD's efforts to the three military departments-Army, Air Force, and Navy-that comprised 70 percent of the spending on DOD's SBIR and STTR programs in fiscal year 2014, the most recent year for which data were available when we started our review. We also included the Office of the Secretary of Defense, which oversees the SBIR and STTR programs for all DOD components.<sup>8</sup> Additionally, we limited our review of HHS's program to the National Institutes of Health, which comprises 98 percent of HHS's SBIR and STTR programs.<sup>9</sup> Further, we requested and reviewed documentation from SBA to determine the actions it has taken to oversee the agencies' efforts related to fraud, waste, and abuse. In addition, we interviewed SBA and participating agencies' SBIR and STTR program staff regarding their actions to address fraud, waste, and abuse in the programs. We also interviewed a non-generalizable sample of 11 small businesses that have received SBIR or STTR awards from at least three agencies from 2012 through 2016 to obtain information on their experiences with, and knowledge of, fraud, waste, and abuse activities by agencies and challenges the small

<sup>&</sup>lt;sup>8</sup>For ease of reporting, we will refer to the SBIR and STTR programs in the Air Force, Army, Navy, as well as the SBIR and STTR work done in the Office of the Secretary of Defense, as DOD in this report.

<sup>&</sup>lt;sup>9</sup>For ease of reporting, we will refer to the SBIR and STTR programs in the National Institutes of Health as HHS in our report.

businesses may have faced regarding the SBIR and STTR fraud, waste, and abuse prevention requirements.<sup>10</sup>

To address our second objective, we requested and reviewed documentation, such as reports and training information, from the participating agencies' OIGs and compared that documentation to the fraud, waste, and abuse prevention requirements for the OIGs included in the reauthorization act. We assessed agency OIGs' implementation of the requirements but not the effectiveness of their implementation. We determined that an OIG had fully implemented a requirement if it could provide documentation that it had fully implemented each part of the requirement. We determined that an OIG partially implemented a requirement if it could provide documentation that it had implemented at least one part of the requirement. We determined that an OIG had not implemented a requirement if it could not provide evidence for implementing any part of that requirement. In addition, we interviewed SBA and participating agencies' OIG and investigative staff who have worked on SBIR and STTR reviews and investigations regarding agency actions to address fraud, waste, and abuse in the programs. Appendix I provides more detail on our scope and methodology.

We conducted this performance audit from April 2016 to April 2017 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

# Background

The SBIR program was initiated in 1982 and has four purposes: (1) to use small businesses to meet federal R&D needs, (2) to stimulate technological innovation, (3) to increase commercialization of innovations derived from federal R&D efforts, and (4) to encourage participation in technological innovation by small businesses owned by disadvantaged individuals and women. The purpose of the STTR program—initiated in 1992—is to stimulate a partnership of ideas and technologies between

<sup>&</sup>lt;sup>10</sup>The information collected from these small businesses is anecdotal and cannot be generalized to all small businesses that receive SBIR or STTR awards, but provide illustrative examples of small businesses' experiences with the fraud, waste, and abuse prevention requirements.

innovative small businesses and research institutions through federally funded R&D. The SBIR and STTR programs are similar in that participating agencies identify topics for R&D projects and support small businesses, but the STTR program requires the small business to partner with a research institution—such as a nonprofit college or university or federally funded R&D center.<sup>11</sup> The programs are currently authorized through fiscal year 2022.<sup>12</sup>

The Small Business Act, which authorizes the programs, establishes the amount of an agency's funding that must be spent on the SBIR and STTR programs each year. In general, the programs are similar across participating agencies. All of the participating agencies follow the same general process to obtain proposals from and make awards to small businesses for both the SBIR and STTR programs. While the Small Business Act requires participating agencies to manage their programs to meet the requirements of the act, the policy directives, and SBA regulations, each participating agency has considerable flexibility in designing and managing the specifics of its programs under these requirements, such as determining research topics, selecting award recipients, and administering funding agreements. At least once per year, each participating agency issues a solicitation requesting proposals for projects in topic areas determined by the agency. Each participating agency uses its own process to review proposals and determine which proposals should receive awards. Those agencies that have both SBIR and STTR programs usually use the same process for both programs. Small businesses are allowed to apply with the same proposal to multiple agencies, but the small business is not allowed to accept multiple awards for the same work.

In August 2009, the Senate Committee on Commerce, Science, and Transportation held a hearing on fraud, waste, and abuse in the SBIR program.<sup>13</sup> Shortly after that hearing, the Council of the Inspectors

<sup>12</sup>National Defense Authorization Act for Fiscal Year 2017, Pub. L. No. 114-328, § 1834 (2016).

<sup>13</sup>Hearing before the Committee on Commerce, Science, and Transportation, United States Senate, *Waste, Fraud, and Abuse in the SBIR Program*, August 6, 2009.

<sup>&</sup>lt;sup>11</sup>Federally funded R&D centers are government-funded entities operated by nongovernmental organizations to meet long-term research or development needs that cannot be met as effectively by existing governmental or contractor resources. These entities typically assist government agencies with scientific research and analysis, systems development, and system acquisition.

General on Integrity and Efficiency's Misconduct in Research Working Group began to discuss fraud in the SBIR and STTR programs and to coordinate efforts related to these programs among the OIGs from SBA and each of the 11 participating agencies.<sup>14</sup> The working group also established a separate subgroup of investigative agents from SBA, the 11 participating agencies' OIGs, and the Department of Justice to share information on ongoing cases, lessons learned, and best practices related to SBIR investigations.

The reauthorization act required SBA to add fraud, waste, and abuse prevention requirements to the policy directives for agencies to implement. In 2012, SBA issued revised policy directives for the SBIR and STTR programs that included new requirements designed to help agencies prevent potential fraud, waste, and abuse in the SBIR and STTR programs. SBA developed these requirements in consultation with participating agencies and a working group of OIGs. The fraud, waste, and abuse sections of the SBIR and STTR policy directives contain the same information and requirements.<sup>15</sup> To meet the 10 requirements, each participating agency must, at a minimum, take the actions summarized below:

- Require certifications from award recipients that they are in compliance with specific program requirements at the time of the award, as well as after the award and during the life cycle of the funding agreement.
- Include information explaining how an individual can report fraud, waste, and abuse on the agency's respective program website and in each funding solicitation using the method provided by the agency's OIG, such as publishing the agency's fraud hotline number.

<sup>&</sup>lt;sup>14</sup>The Council of the Inspectors General on Integrity and Efficiency is as an independent entity within the executive branch with a mission to address integrity, economy, and effectiveness issues that transcend individual government agencies and increase the professionalism and effectiveness of personnel by developing policies, standards, and approaches to aid in the establishment of a well-trained and highly skilled workforce in the OIGs. 5 U.S.C. App. § 11 (2017).

<sup>&</sup>lt;sup>15</sup>SBA updated the program policy directives again in 2014, but did not make changes to the fraud, waste, and abuse prevention requirements. SBA is revising the policy directives to combine them into a single document for both programs and to make other changes. The April 7, 2016, version of the draft policy directive published in the Federal Register also did not contain any changes to the fraud, waste, and abuse prevention requirements.

- Designate at least one individual in the agency to, at a minimum, serve as the liaison for the SBIR or STTR program, the OIG, and the agency's suspension and debarment official and ensure that inquiries regarding fraud, waste, and abuse are referred to the appropriate office.
- Include on its program website information concerning successful prosecutions of fraud, waste, and abuse in the programs.
- Establish a written policy requiring all personnel involved with the program to notify the OIG if anyone suspects fraud, waste, and/or abuse and ensure the policy is communicated to all personnel.
- Create or ensure there is an adequate system to enforce accountability by developing separate standardized templates for referrals to the OIG and the Suspension and Debarment Official, as well as a process for tracking such referrals.
- Ensure compliance with program eligibility requirements and terms of funding agreements.
- Work with the agency's OIG in its efforts to establish fraud detection indicators;<sup>16</sup> coordinate sharing of information on fraud, waste, and abuse between federal agencies; and improve education and training to program officials, applicants, and award recipients.
- Develop policies and procedures to avoid funding essentially equivalent work already funded by another agency.
- Consider enhanced reporting requirements during the funding agreement.

According to the Inspector General Act of 1978, as amended, agency OIGs are established in order to create independent and objective units to provide leadership and coordination and recommend policies for activities designed to promote economy, efficiency, and effectiveness in the administration of agencies' programs and prevent and detect fraud and abuse in their agencies' programs and operations. Additional purposes of agency OIGs include conducting and supervising audits, inspections, and investigations.<sup>17</sup> Furthermore, according to the act, OIGs are to provide a

<sup>&</sup>lt;sup>16</sup>Concealed liabilities and expenses on a financial statement is an example of a fraud detection indicator.

<sup>&</sup>lt;sup>17</sup>Audits are independent, objective assessments of the stewardship, performance, or cost of an agency's policies, programs, or operations. Investigations can involve allegations of criminal, civil, or administrative misconduct, and can result in criminal prosecutions, fines, civil monetary penalties, administrative sanctions, and personnel actions.

means for keeping the head of the agency and Congress fully and currently informed about problems and deficiencies related to the administration of such programs and operations and the need for and progress of corrective action.<sup>18</sup> In addition to the requirements for the participating agencies, the reauthorization act included requirements for the participating agencies' OIGs.<sup>19</sup> Each OIG is to cooperate to prevent fraud, waste, and abuse in the SBIR program and the STTR program by:

- establishing fraud detection indicators;
- · reviewing regulations and operating procedures of the federal agency;
- coordinating information sharing between Federal agencies, to the extent otherwise permitted under federal law; and
- improving the education and training of and outreach to:
  - administrators of the SBIR program and the STTR program of the Federal agency;
  - applicants to the SBIR program or the STTR program; and
  - recipients of awards under the SBIR or STTR program.

In addition, each participating agency's OIG is to submit an annual report to specified congressional committees detailing any SBIR or STTR fraud, waste, or abuse investigations over the past year, including the costs for those investigations, among other things.<sup>20</sup>

The Small Business Act and the SBIR and STTR policy directives outline SBA's responsibilities for overseeing the SBIR and STTR programs. Specifically, the Small Business Act requires SBA to survey and monitor the operation of the SBIR and STTR programs at the agency level.<sup>21</sup> Further, the policy directives state that SBA is responsible for ensuring

<sup>&</sup>lt;sup>18</sup>5 U.S.C. App. § 2(a) (2017).

<sup>&</sup>lt;sup>19</sup>SBIR/STTR Reauthorization Act of 2011, Pub. L. No. 112-81, div. E, tit. LI, § 5143(a)(5), 125 Stat. 1298, 1855-6.

<sup>&</sup>lt;sup>20</sup>SBIR/STTR Reauthorization Act of 2011, § 5143(c).

<sup>&</sup>lt;sup>21</sup>15 U.S.C. § 638(b)(6) (2017).

that each participating agency has taken steps to maintain a fraud, waste, and abuse prevention system to minimize their impact on the programs.<sup>22</sup>

Our Framework for Managing Fraud Risks in Federal Programs (Fraud Risk Framework) provides comprehensive guidance for conducting fraud risk assessments and using the results as part of the development of a robust antifraud strategy.<sup>23</sup> It also describes concepts and leading practices for establishing an organizational structure and culture that are conducive to fraud risk management, designing and implementing controls to prevent and detect potential fraud, and monitoring and evaluating fraud risk management activities.<sup>24</sup>

Implementation of Agency Fraud, Waste, and Abuse Prevention Requirements Has Varied, and SBA Has Provided Limited Oversight of the Implementation Agencies have varied in their implementation of the SBIR and STTR fraud, waste, and abuse prevention requirements in SBA's policy directives, although some agencies have taken actions beyond those required in the policy directives. Beyond issuing the policy directives, however, SBA has taken few actions to oversee the participating agencies' implementation of the fraud waste, and abuse prevention requirements. Further, SBA has not evaluated the fraud, waste, and abuse requirements in the directives to determine whether the requirements are clear and effective.

<sup>&</sup>lt;sup>22</sup>SBA, SBIR Program Policy Directive, Section 11 (D)(4) (Washington, D.C.: Feb. 24, 2014). SBA, STTR Program Policy Directive, Section 11 (D)(4) (Washington, D.C.: Feb. 24, 2014).

<sup>&</sup>lt;sup>23</sup>GAO, *A Framework for Managing Fraud Risks in Federal Programs*, GAO-15-593SP (Washington, D.C.: July 2015).

<sup>&</sup>lt;sup>24</sup>The Fraud Risk Framework is consistent with the leading practices in the standards and guidance of the Institute of Internal Auditors. Therefore, in this report, we refer to both the Framework's concepts and leading practices as leading practices.

Agencies Have Varied in Implementation of Their Fraud, Waste, and Abuse Prevention Requirements, and Some Have Engaged in Additional Prevention Activities

Agencies have varied in their implementation of the 10 minimum fraud, waste, and abuse prevention requirements included in SBA's policy directives. All 11 agencies fully implemented 2 of the requirements: to include how to report fraud, waste, and abuse on the agency's website and solicitation, and to designate a liaison for the OIG and Suspension and Debarment Official. For 6 other requirements, more than half of the agencies had fully implemented the requirements while the other agencies had partially or not implemented them. For the remaining 2 requirements, 3 agencies had fully implemented 1, while only 1 agency had fully implemented the other. Figure 1 shows the number of agencies that implemented each of the requirements, and appendix II provides additional information on individual agencies' implementation of the requirements.





<sup>a</sup>The suspension and debarment process helps protect the federal government from fraud, waste and abuse by using a number of tools to avoid doing business with non-responsible contractors; the Suspension and Debarment Official makes the decision as to whether to suspend or debar a contractor. "Suspension" means action taken to disqualify a contractor temporarily from government contracting and government-approved subcontracting. "Debarment" means action taken to exclude a contractor from government contracting and government-approved subcontracting for a reasonable, specified period.

Agencies varied in their degrees of implementation for some requirements. For example, NASA is the only agency that fully implemented all three components of the requirement to develop templates for referrals to the OIG and Suspension and Debarment Official. Three agencies did not implement any of the components of the requirement. Of the 7 agencies that partially implemented this requirement, none had both templates, 2 agencies did not have a tracking system in place, and 1 agency had a partial tracking system in place. Officials from most agencies said that they either use their OIG's standard process or contact their OIG in person, by telephone, or e-mail to make referrals to the OIG. Additionally, 3 agencies—HHS, NASA, and NSF— implemented all of the components of the requirement to coordinate with the OIG on fraud, waste, and abuse, while the other agencies varied in their implementation of the components. For example, 7 agencies' SBIR or STTR offices did not implement or fully implement the requirement to work with their OIG to establish fraud detection indicators.

In addition to the variation in the number of agencies that have implemented each requirement, we found that agencies varied in how they implemented the requirements. Some examples of how agencies have implemented requirements include the following:

Require certifications from awardees. Small businesses must certify that they are eligible for the SBIR and STTR programs and that they meet specific program requirements during the life of the funding agreement.<sup>25</sup> Six agencies fully implemented and 5 agencies partially implemented the certification requirement. The agencies that fully implemented the requirement used the language required by the policy directives and told us they collected all the certifications. However, we identified some variation in how the remaining agencies implemented the requirement. For example, 1 agency-HHSrequires awardees to sign certifications at the appropriate times but does not collect the signed life cycle certifications from small businesses. Instead, awardees complete the life cycle certifications and maintain them on file at their locations. HHS officials told us that this practice is in accordance with HHS's records and retention policy and the SBIR contract solicitation,<sup>26</sup> and that they believe HHS is compliant with the policy directives because small businesses must provide the life cycle certifications upon request. The remaining 4 agencies that partially implemented the requirement required small

<sup>&</sup>lt;sup>25</sup>We refer to the certifications during the life of the funding agreement as "life cycle certifications."

<sup>&</sup>lt;sup>26</sup>Per Section 8.4.2 of National Institute of Health Grants Policy Statement. This information is also stated in the HHS SBIR solicitation.

businesses to submit certifications, but did not use the certification language that is required by the policy directives.

- List examples of successful prosecutions on website. Six agencies fully implemented the requirement to post examples of successful fraud prosecutions on their SBIR website and 2 agencies partially implemented the requirement with one of their components posting the information. The agencies that posted examples of successful prosecutions implemented the requirement differently, in the absence of specific direction. Specifically, 4 agencies posted the information on a page designated for reporting fraud, waste, and abuse and 3 agencies posted the information on other pages, where it could be more difficult for applicants or awardees to find. For example, 1 agency posted an example of a prosecution with other program news stories, such as announcements of solicitations. However, as of February 2017, the information was on the second page of the list of news stories, making it difficult to find. Additionally, 1 agency posted the information on an internal website that award recipients or applicants cannot typically access. Officials from the 3 agencies that did not post such examples told us they did not have any successful prosecutions of their own to post or did not know where to find such information.
- Consider enhanced reporting requirements. Nine agencies fully implemented the requirement to consider enhanced reporting requirements during the funding agreement; however, interpretations of how to implement the requirement varied widely among the agencies. The policy directives require agencies only to consider enhanced reporting requirements during the funding agreement and do not require agencies to implement such reporting requirements. Officials from the agencies that had implemented the requirement said they typically interpreted enhanced reporting as monthly invoices and reports, project demonstrations, or additional certifications.

We identified one instance in which an agency has not fully implemented a requirement and this could affect its ability to prosecute fraud, waste, and abuse in the programs. As discussed previously, HHS requires small business awardees to sign certifications at the appropriate times, but these small businesses are not required to submit the life cycle certifications to the agency. HHS OIG officials told us that they raised concerns about this practice to HHS SBIR officials based, in part, on their 2014 review of the HHS SBIR and STTR programs.<sup>27</sup> Of the 11 participating agencies, HHS is the only agency that administers but does not collect the self-certifications from SBIR and STTR applicants or awardees, according to agency officials. Having copies of the certification forms allow agencies to document small businesses' assurance that they are aware of and agree to comply with program requirements. HHS OIG officials told us they continue to be concerned that HHS does not require the small businesses to submit the SBIR and STTR certifications to the SBIR officials. In addition, OIGs at most of the participating agencies said that they often use these self-certifications to show intent to commit fraud, if any fraud later occurs, as the small businesses are certifying the accuracy and truth of the information they are submitting to the agency. Without collecting copies of the certification forms, it may be more difficult to prosecute HHS SBIR or STTR awardees if they commit fraud, waste, or abuse.

In addition to the requirements in the policy directives, officials from 9 agencies told us they implemented other activities to help identify or prevent fraud, waste, and abuse in the programs. Examples of agency activities include the following:

- Conducting site visits. Officials from 4 agencies— Education, DOE, DHS, and NASA—told us they conduct site visits to their SBIR or STTR awardees, either in person or virtually, in part to identify and prevent fraud, waste, and abuse.<sup>28</sup> Site visits allow officials to view, either in person or remotely, the awardee's research efforts and can confirm that the necessary facilities exist for technical R&D work. According to Department of Education officials, its virtual site visits serve as a way to confirm that that the SBIR awardee has completed the work proposed.
- Establishing offices or working groups. Two agencies have established or are planning to establish offices or working groups to address potential fraud, waste, and abuse issues. For example, NASA established the Acquisition Integrity Program, which is an office that works as the liaison between the agency's SBIR and STTR program

<sup>&</sup>lt;sup>27</sup>Department of Health and Human Services, Office of Inspector General: *Vulnerabilities in the HHS Small Business Innovation Research Program*, OEI-04-11-00530 (Washington, D.C.: April 2014).

<sup>&</sup>lt;sup>28</sup>NASA officials told us that the agency requires its first time phase II awardees to create video recordings of their facilities and equipment, among other things. Education's SBIR program also uses a similar virtual site visit.

staff and the OIG, as one way to help reduce and prevent fraud, waste, and abuse in the programs. This office monitors the coordination of criminal, civil, contractual, and administrative remedies for significant investigations of fraud or corruption related to procurement activities agency-wide, among other things. In addition, DOD's SBIR and STTR program manager told us that, beginning in early 2017, he plans to convene a working group comprised of SBIR and STTR program officials and investigative service staff from the Army, Navy, Air Force, and other parts of DOD to discuss best practices and share information regarding fraud, waste, and abuse issues.

- Orientation meetings. According to officials, 3 agencies—DHS, EPA, and NSF—hold in-person orientation meetings with awardees to provide an overview of the agency's SBIR or STTR program and related rules and requirements, including a presentation on fraud, waste, and abuse.<sup>29</sup>
- Certifications and Reporting. Six agencies require more certifications or reporting from awardees than is required in the policy directives. Specifically, officials from these agencies told us they require additional certifications beyond the three mandated life cycle certifications: (1) at the time of final payment or disbursement of Phase I funding, (2) before more than half of Phase II funding has been paid or disbursed, and (3) before final payment or disbursement of Phase II funding.<sup>30</sup> For example, DOT and some Commerce officials told us that they require awardees to submit life cycle certifications with every invoice. Army, EPA, and NASA officials told us that they require monthly or quarterly reporting by awardees. Further, both Army and NSF officials told us that they require the additional reporting in order for awardees to receive their SBIR or STTR funds.

<sup>&</sup>lt;sup>29</sup>Officials from all three program offices told us they coordinate with their OIGs to administer these presentations to awardees.

<sup>&</sup>lt;sup>30</sup>The SBIR and STTR programs each include three phases. In Phase I, agencies make awards to small businesses to determine the scientific and technical merit and feasibility of ideas that appear to have commercial potential. In Phase II, small businesses with Phase I projects that demonstrate scientific and technical merit and feasibility, in addition to commercial potential, may compete for awards of up to \$1 million to continue the R&D for an additional period. Phase III is for small businesses to pursue commercialization of technology developed in prior phases.

Representatives from each of the 11 SBIR and STTR small businesses that we interviewed said that they had not experienced any challenges in complying with the programs' fraud, waste, and abuse prevention requirements. Of the 10 fraud, waste, and abuse prevention requirements that the agencies must implement, small businesses are directly affected by only 2 requirements: providing life cycle certifications and, if required by their awarding agency, participating in fraud, waste, and abuse training. Representatives from each of the 11 small businesses we interviewed told us they did not find these fraud, waste, and abuse prevention requirements to be burdensome, and representatives from 9 of the small businesses told us that the level of the SBIR and STTR fraud. waste, and abuse prevention requirements are about the right amount. Representatives from nearly all of the small businesses we interviewed said they had seen the effects of the agencies' implementation of some of the requirements. For example, representatives from 10 of the small businesses reported that at least 1 agency from which they had received an award had provided information to them on how to report fraud, waste, and abuse to the agency's OIG, either on the agency's SBIR or STTR website or in the solicitation that they used to apply for funding. Further, representatives from all 11 small businesses that we interviewed said that they had not observed any fraud, waste, or abuse in the SBIR or STTR programs by another small business.

### SBA Has Taken Few Actions to Oversee Agencies' Implementation of Fraud, Waste, and Abuse Prevention Requirements

SBA has taken few actions to oversee agencies' implementation of the policy directives' minimum requirements to address fraud, waste, and abuse in the SBIR and STTR programs. In 2012, SBA convened a group of SBIR and STTR program managers and OIG officials to develop and issue the fraud, waste, and abuse prevention requirements. Additionally, according to SBA officials, SBA checked the agencies' SBIR and STTR program websites to confirm that each agency provided information on its website and in each solicitation on how to report fraud, waste, and abuse, as required by one of the fraud, waste, and abuse prevention requirements. Further, in 2016, SBA officials said they made some improvements to the SBIR.gov website, which includes SBA's database of SBIR and STTR awards, to include the full text of proposals for all SBIR or STTR awards, improving the appearance of awards in the analytics section of the website, and improving accuracy of the data by reviewing incoming data for completeness and duplicate entries. By SBA making this information available, SBA officials said that agencies could search on the website to identify essentially equivalent work that could lead to duplicate funding. However, most of the program managers we interviewed said that the website-in its current form-was not useful for

searching for duplicate awards. Finally, according to officials, SBA provides opportunities for SBIR and STTR program managers to discuss the implementation of the fraud, waste, and abuse prevention requirements. SBA hosts meetings with SBIR and STTR program managers every 2 months to discuss various aspects of the programs. According to SBA's meeting agendas, fraud, waste, and abuse was on the agenda once between July 2015 and May 2016, although officials said that program managers could discuss the requirements more frequently, if needed.<sup>31</sup> In addition to the program managers' meetings, SBA officials said they are considering establishing a working group that could address fraud, waste, and abuse but they had not done so as of January 2017.<sup>32</sup>

However, SBA had not taken steps to ensure that each agency had implemented all of the fraud, waste, and abuse requirements. As noted earlier, the Small Business Act requires SBA to survey and monitor the operation of the SBIR and STTR programs at the agency level. Further, the policy directives state that SBA is responsible for ensuring that each participating agency has taken steps to maintain a fraud, waste, and abuse prevention system to minimize their impact on the programs. With the exception of its efforts to confirm that agencies had included information on reporting fraud, waste, and abuse on their websites and in solicitations described above, SBA has not confirmed implementation of the fraud, waste, and abuse prevention requirements. Specifically, SBA officials do not know the status of agencies' implementation because they have not requested documentation from the agencies or other evidence to determine whether implementation has occurred. Without confirming that participating agencies are implementing the requirements, SBA does not have reasonable assurance that each agency has a system in place to help reduce their vulnerability to fraud, waste, and abuse. SBA officials told us that they believe that they have fulfilled their role to oversee agencies' implementation of the fraud, waste, and abuse prevention requirements by convening the group of program managers and OIG officials to develop and issue the requirements. However, SBA's issuance of the requirements neither constitutes oversight of those requirements nor ensures their implementation by the 11 participating agencies.

<sup>31</sup>We focused our review of meeting agendas on the year prior to the beginning of this review. SBA added updates on our review to the meeting agendas starting in July 2016.

<sup>32</sup>SBA establishes working groups, which include a small number of program managers, to discuss issues and present ideas to the larger group at the program managers' meetings.

SBA Has Not Assessed the Fraud, Waste and Abuse Requirements in the Policy Directives to Ensure that They are Effective and Clear

SBA updated the SBIR and STTR policy directives in 2012 to include the fraud, waste, and abuse prevention requirements. However, SBA officials said they have not taken action since 2012 to review the requirements to determine whether they are effective or whether any revisions are needed. We identified requirements that some agency officials said were not clear, or may be unnecessary.

We identified 3 requirements that some agency officials said were not clear.

List examples of successful prosecutions on agency websites. The policy directives require agencies to list examples of successful fraud prosecutions on their websites, but they do not indicate whether the examples must be from the agency itself or whether the agency is to post examples from other participating agencies in the absence of its own examples. As noted earlier, officials at 3 agencies told us they were unaware of, or did not have any, successful SBIR or STTR prosecutions to post. However, if the requirement is designed to deter fraud, it may be useful for agencies to post examples of prosecutions regardless of the agency in which the example originated. A representative from one small business we interviewed said that seeing the posted prosecutions on an agency's SBIR website made the agency's efforts against fraud, waste, and abuse more credible. For this reason, in our assessment of agencies' implementation of the requirements, we concluded that an agency had not implemented the requirement if it did not include any examples of successful prosecutions on its website, even if the agency said that it did not have any.

In addition, the policy directives do not indicate where on the website each agency is supposed to post these examples of successful prosecutions. As mentioned previously, the agencies that posted this information did so in different places on their websites. According to NSF program officials, NSF's SBIR website has more than 80 pages and the officials indicated that it was unclear where prosecution information should be posted. Additionally, OIG officials at 1 agency raised concerns about the location of the examples that the SBIR program had posted, noting that if the point of posting such prosecutions was to deter fraud, the information should be on the main part of the website to ensure that users saw it. However, officials at 1 agency raised potential privacy concerns about posting information about successful prosecutions on their program website, indicating that it was not clear in the policy directives what kind of information agencies are required to include on their websites.

- Consider enhanced reporting. The policy directives require agencies only to consider enhanced reporting requirements during the funding agreement and do not require agencies to implement such reporting requirements. As mentioned previously, the 9 agencies that fully implemented this requirement did so in various ways. Some agency officials—including officials at the 2 agencies that had not fully implemented the requirement—told us they were unclear about what the requirement meant. In our assessment of agencies' implementation of the requirements, we determined that an agency implemented the requirement if it considered any type of reporting not already required by the policy directives. Further, program managers at 1 agency raised a concern that enhanced reporting could constitute an undue burden on the small businesses.
- *Policies to avoid funding essentially equivalent work.* The requirement for participating agencies to check "essentially equivalent work" is inconsistent with the definition of that term elsewhere in the policy directives, which could make the requirement unclear. The fraud, waste, and abuse requirement in the policy directives specifies that agencies should check for essentially equivalent work funded by other agencies. Most agencies have implemented the requirement as written, and in our assessment of agencies' implementation of the requirements, we determined that an agency implemented the requirement if it checked for essentially equivalent work at 1 or more agencies. However, elsewhere in the policy directives, "essentially equivalent work" is defined as work that is substantially the same research in more than one application submitted to the same federal agency or two or more different federal agencies. Two of the 5 agencies that have multiple offices involved in their SBIR or STTR programs did not check, or did not fully check, for essentially equivalent work within their own agencies. SBA officials acknowledged that the policy directives were inconsistent in this regard but said that the agencies should look for the definition elsewhere in the policy directives. However, without consistent definitions of the terms, SBA has no assurance that participating agencies are appropriately checking for such work that they fund as well as such work funded by other agencies, placing agencies at a higher risk of funding essentially equivalent work.

Under federal standards for internal control, an oversight body should oversee the entity's internal control system, and that communication is necessary for effective oversight.<sup>33</sup> The standards state that management is to evaluate and document the results of ongoing monitoring and personnel may report the nature of its findings to the oversight body. According to the standards, the oversight body is to receive quality information on significant matters relating to risks, changes, or issues that impact the entity. As mentioned previously, SBA meets every 2 months with the SBIR and STTR program managers to discuss various issues. According to the SBA officials, no one has raised questions or expressed confusion about implementing the fraud, waste, and abuse prevention requirements. However, given that we identified several areas in which agencies expressed confusion or implemented the requirements differently, SBA may need to more proactively solicit agency information, which would be consistent with internal control standards for an oversight body.

Additionally, based on our analysis of agencies' implementation of the requirements and interviews with program managers and OIG officials, 2 of the requirements-to use a separate, standardized template for SBIR and STTR program officials to make referrals to their OIGs and to require training for SBIR and STTR applicants-may be unnecessary. Only 1 agency fully implemented the requirement to create separate standardized templates for referrals to the agency's OIG and Suspension and Debarment Official.<sup>34</sup> It is not clear from the requirement as written if any agency templates for referrals to the OIG and to the Suspension and Debarment Official would meet the requirement, or if the templates need to be SBIR or STTR specific. DOT OIG officials said that they considered creating a separate form for reporting fraud, waste, and abuse for the SBIR program, but they determined it was a more efficient process to use their existing standard form. Similarly, EPA OIG officials said it would be a lot of extra work and complications to develop a template specific to the SBIR program, particularly when the existing template used for all other

### <sup>33</sup>GAO-14-704G.

<sup>&</sup>lt;sup>34</sup>The suspension and debarment process helps protect the federal government from fraud, waste and abuse by using a number of tools to avoid doing business with non-responsible contractors. The Suspension and Debarment Official makes the decision as to whether to suspend or debar a contractor. "Debarment" means action taken to exclude a contractor from government contracting and government-approved subcontracting for a reasonable, specified period. "Suspension" means action taken to disqualify a contractor temporarily from government contracting and government-approved subcontracting.

programs is working well. In our assessment of agencies' implementation of the requirements, we determined that an agency had implemented the requirement if it had separate templates for referrals to the OIG and the Suspension and Debarment Official, regardless of whether these templates were SBIR or STTR specific.

In addition, the requirement to train SBIR and STTR applicants—who may or may not receive an SBIR or STTR award—on fraud, waste, and abuse issues is a component of the requirement for agencies to coordinate with the OIG and may present an unnecessary burden on the agencies and OIGs. Based on our analysis, 7 agencies did not fully address this aspect of the requirement. The Air Force, one component within DOD, requires all applicants to take an online training and provide the certificate showing that they completed the training as part of their SBIR or STTR applications. Air Force officials estimated that about half of the applicants for the first solicitation that required this certification were originally ineligible for awards because they did not fully complete the training or demonstrate that they had done so. However, the Air Force provided a grace period so that the small businesses could complete the training and receive the required certification, making them eligible for awards. Based on data from fiscal year 2013, the most recent year for which data are available, of the 20,200 SBIR Phase 1 applications that agencies received, about 15 percent received SBIR awards. Similarly, in 2013, of the about 2,700 STTR Phase 1 applications that agencies received, about 18 percent received STTR awards.

Moreover, SBA has not evaluated whether any of the requirements need to be updated. In 2012, SBA included templates in its policy directives that include language that agencies are supposed to use for the certifications required of the small businesses. Officials from 1 agency— NASA—said that they originally used the language included in SBA's sample certification, but as a result of lessons learned from working with the Department of Justice on SBIR fraud prosecutions, NASA has made revisions to strengthen its self-certification forms. However, NASA program officials told us they did not notify SBA of the change in the language. SBA officials told us they met with NASA program officials in March 2017 to discuss the changes in the self-certification language.

Leading practices in our Fraud Risk Framework state that agencies are responsible for evaluating outcomes using a risk-based approach and

adapting activities to improve fraud risk management.<sup>35</sup> In this context, an evaluation of the outcomes could include assessing whether the requirements are necessary and meeting their intended purposes; are placing an undue burden on the agencies; or otherwise need to be revised, updated, or eliminated, among other things. However, SBA officials told us that they have not evaluated the outcomes of participating agencies' implementation of the fraud, waste, and abuse prevention requirements. Without evaluating the outcomes of the requirements, SBA does not have reasonable assurance that the requirements are necessary, appropriate, and meet the intended purpose of preventing fraud, waste, and abuse in SBIR and STTR programs and cannot change them accordingly.

The Majority of OIG Requirements Have Been Implemented by Most Offices, but DOD Military Services' OIGs Are Not Implementing These Requirements Most OIGs for the 11 participating agencies have implemented the majority of their SBIR and STTR fraud, waste, and abuse prevention requirements, as specified in the reauthorization act, with 2 OIGs engaging in additional activities to prevent and address fraud. However, the OIGs for the military services—Army, Air Force and Navy—are not implementing the requirements, or delegating them to their investigative services.

<sup>35</sup>GAO-15-593SP.

Most OIGs Have Implemented the Majority of Their Fraud, Waste, and Abuse Prevention Requirements and Some Identified Challenges to Implementing Requirements

Most OIGs for the participating agencies have implemented the majority of their fraud, waste, and abuse prevention requirements for the SBIR and STTR programs that were included in the reauthorization act.<sup>36</sup> For example, OIGs at 5 of the 11 agencies—Education, DOE, HHS, NASA, and NSF—have implemented all of the fraud, waste, and abuse prevention requirements for the programs. The 6 other OIGs have varied in their implemented each of the requirements. Between 5 and 11 OIGs have fully implemented each of the requirements. Specifically, all 11 of the OIGs have established fraud detection indicators and shared information on fraud, waste, and abuse. Most of the OIGs have provided training for SBIR and STTR administrators, as well as training for SBIR and STTR awardees. (See fig. 2 and app. III for more information on the OIGs' implementation of fraud, waste, and abuse prevention requirements).

<sup>&</sup>lt;sup>36</sup>We determined that an OIG had fully implemented a requirement if it could provide documentation that it had fully implemented each part of the requirement. We determined that an OIG had partially implemented the requirement if it could provide documentation that they had at least implemented one part of the requirement. We determined that an OIG had not implemented the requirement if it could not provide evidence for implementing any part of that requirement.







Source: GAO analysis of agency OIG data. | GAO-17-337

Officials from 4 of the 6 OIGs that did not implement all of their requirements said that they had not done so because they were not previously aware of the specific SBIR and STTR fraud, waste, and abuse prevention requirements for the OIGs but said they would do so in the future. In addition, officials from the 3 agencies whose OIGs had not provided fraud, waste, and abuse training to SBIR or STTR awardees told us that they plan to do so in the future.

In addition, the reauthorization act requires participating agencies' OIGs to submit annual reports to specified congressional committees detailing any SBIR or STTR fraud, waste, or abuse investigations over the past year, including the costs for those investigations, among other things.<sup>37</sup> Each of the 11 agencies' OIGs submitted reports for each of the 4 years.<sup>38</sup>

Some OIGs also have implemented or plan to implement additional activities beyond those required in the reauthorization act. Examples of these activities include the following:

- NASA OIG officials told us that OIG staff make in-person visits to some NASA SBIR or STTR awardees to check on their status, including checking for any fraud, waste or abuse issues. The OIG staff are then able to share this information with the NASA program staff.
- DOE OIG officials said they generally plan to conduct audits of the agency's SBIR programs every 3 to 4 years, in an effort to consistently offer recommendations to improve and strengthen DOE's SBIR programs, including any issues they find related to fraud, waste or abuse.

The OIGs have also shared information through an interagency working group focusing on fraud, waste, and abuse in the SBIR and STTR programs, which is organized by the Council of the Inspectors General on Integrity and Efficiency. The NSF OIG has taken leadership of this working group on behalf of the Council, and DOE and NASA OIG officials serve as co-chairs of the group. Representatives from each participating agency's OIG attend this working group, which meets quarterly. The SBA OIG does not officially participate in this group, but an SBA OIG official told us he has attended some of the meetings and, additionally, has provided support on specific SBIR or STTR fraud cases, among other things. OIG officials told us this working group provides a forum for the members to share information and best practices related to identifying and preventing fraud, waste, and abuse in the SBIR and STTR programs.

<sup>37</sup>SBIR/STTR Reauthorization Act of 2011, Pub. L. No. 112-81 div. E, tit. LI, § 5143(c), 125 Stat. 1298, 1857.

<sup>&</sup>lt;sup>38</sup>The DOT OIG issued a report in January 2016 to cover the previous 4 years. The USDA OIG issued a report in December 2016 that covered fiscal years 2013 through 2016. The DOE OIG issued three reports in June 2016 to cover the previous 3 years. The Department of Commerce OIG issued separate reports for fiscal years 2012 through 2016 in January 2017.

For example, in its December 2016 meeting, the group discussed ways to implement the requirement in the reauthorization act to train applicants and awardees, according to officials from the NSF OIG.

As part of the working group, the NSF OIG has sponsored two conferences—in 2011 and 2016—to share information on fraud, waste, and abuse in the SBIR and STTR programs. The 2016 conference included speakers from SBA, the participating agencies' OIGs and their SBIR program leaders, as well as Department of Justice prosecutors who had brought SBIR and STTR fraud cases to trial. Approximately 200 officials from the OIGs, SBIR and STTR agency program offices, and the Department of Justice attended this 1-day conference. The NSF OIG has also developed informational materials on SBIR fraud to share with other participating agencies' OIGs.

As with the agency requirements for the SBIR and STTR programs, most of the fraud, waste, and abuse prevention requirements for the OIGs do not directly affect small businesses, except for the requirement to conduct fraud, waste, and abuse training. Representatives we interviewed from 8 of the 11 small businesses said that their businesses had taken training on fraud, waste, and abuse issues provided by an agency that gave them an SBIR or STTR award. Representatives from each of the 8 small businesses said that such fraud, waste, and abuse training for SBIR and STTR awardees was useful. For example, a representative from 1 small business told us that it was important for awardees to know the rules about fraud, waste, and abuse in the programs. This representative said that requiring the same fraud, waste, and abuse training of all awardees is important so that all of the small businesses are held to the same standards for the program. None of the small business representatives we interviewed said that they saw the fraud, waste, and abuse training as a burden. For example, two representatives we interviewed from 1 small business said that the time they had spent on the training was a relatively short time commitment to get a fairly significant amount of taxpayer funds for their project.

Officials from some OIGs identified some challenges in implementing their fraud, waste and abuse prevention requirements and addressing fraud, waste, and abuse in the 11 agencies' programs, including:

Submitting annual reports to Congress. Three OIGs told us that they
found it a challenge to submit the required reports to congressional
committees. For example, OIG officials at 1 agency said that because
the SBIR or STTR investigations tend to last longer than 1 year, the

annual report to Congress may not provide a full picture of all of the SBIR or STTR investigative work that the agency OIG has done in that year.<sup>39</sup> In terms of the timing and reporting period of reports, the reauthorization act requires the OIGs to submit the annual report to the committees by October 1 each year on activities conducted over the past year. The OIG working group discussed this requirement and interpreted it to mean that they had to report on the investigations from the preceding fiscal year but found that it would be challenging to report the information accurately for the fiscal year on the first day of the new fiscal year, according to an NSF OIG official. For that reason, the working group notified the relevant congressional committees that they would submit the reports by November 1 instead; the NSF OIG official told us that the working group received no objections to this date change.

- Relative priority of the SBIR or STTR programs compared to other programs. Officials from 5 agencies' OIGs or investigative services told us that SBIR and STTR investigations are generally a lower priority for them because the programs represent a relatively small amount of money compared to other programs that their agencies fund.<sup>40</sup> These officials said that the relatively small budgets involved for the SBIR and STTR programs present a challenge for them to investigate potential fraud, waste, and abuse in the SBIR and STTR programs because they need to prioritize their investigations in areas where the agencies spend more money, such as on larger programs that their agencies fund. For example, HHS OIG officials told us their main focus is on Medicare and Medicaid fraud, because those programs represent the majority of their agency's funding.
- Communication between OIGs and agencies. OIG officials from 2 agencies that have multiple offices that implement SBIR or STTR programs told us that they struggle to coordinate with all of the relevant SBIR and STTR offices within their agency and to know what each office has done, or not done, in its activities. For example, OIG officials from 1 agency told us that it is hard for them to identify the right people in each office to include on calls or to learn how each office oversees the SBIR program and complies with the SBIR requirements, among other things.

<sup>39</sup>OIG officials said that they generally reported data in the fiscal year the investigation was completed, which may not be the same fiscal year that the investigation began.

<sup>&</sup>lt;sup>40</sup>In addition to the DOD OIG, DOD's components of Army, Navy and Air Force also have OIGs, as well as investigative services.

OIG Responsibilities are Dispersed in DOD, and Military Service OIGs Are Not Implementing or Delegating Their SBIR and STTR Fraud, Waste, and Abuse Prevention Requirements

DOD is unique among the SBIR and STTR agencies in that oversight and audit responsibilities are separated between various OIGs and specific investigative services. According to the reauthorization act, each participating agency's OIG is responsible for implementing the fraud, waste, and abuse prevention requirements,<sup>41</sup> and under the Small Business Act, a participating agency includes DOD's military departments. However, the DOD OIGs do not investigate SBIR and STTR fraud; instead, such investigations are conducted by separate investigative services within each DOD component, according to a DOD investigative official.<sup>42</sup> We found that the military service OIGs—Army, Air Force, and Navy—are neither implementing all of their SBIR and STTR fraud, waste, and abuse prevention requirements, nor delegating the completion of these requirements to the investigative services.

Specifically, we found that none of the three military services' OIGs had taken actions to implement their SBIR fraud, waste, and abuse prevention requirements, although the DOD OIG had taken some steps to implement these requirements. Specifically, the DOD OIG established fraud detection indicators and has shared information with other federal agencies on SBIR and STTR fraud cases through its involvement in the OIG working group on SBIR and STTR fraud, waste, and abuse. However, the DOD OIG has only partially reviewed the SBIR and STTR regulations and operating procedures for the three services—Army, Air Force, and Navy—that constitute the largest budgets for SBIR and STTR programs in DOD. Moreover, while the DOD OIG has been involved in the training of SBIR and STTR program staff, it has not coordinated or been involved in the training of SBIR and STTR applicants or awardees.

On the other hand, the Army, Air Force, and Navy investigative services have implemented several of the SBIR and STTR fraud, waste, and abuse prevention measures that are required of the OIGs. For example, representatives from the Naval Criminal Investigative Service, the Army's Criminal Investigation Command, and the Air Force's Office of Special Investigations have coordinated information sharing by attending the OIG

<sup>&</sup>lt;sup>41</sup>SBIR/STTR Reauthorization Act of 2011, § 5143(c).

<sup>&</sup>lt;sup>42</sup>Under the authority of the Inspector General Act of 1978, the Defense Criminal Investigative Service and the military criminal investigative organization within each of the services are to investigate alleged procurement fraud. For example, the Naval Criminal Investigative Service has primary responsibility for investigating alleged procurement fraud affecting the Navy.

working group on SBIR and STTR fraud, waste, and abuse. Officials from all three investigative services in our review also told us that they have conducted, or are conducting, fraud investigations in conjunction with other federal agencies and are sharing information to do so, which meets the spirit of one of the OIG requirements. In addition, the Air Force's Office of Special Investigations recently developed—and helped the Air Force SBIR and STTR program to launch—fraud, waste, and abuse training for all applicants.<sup>43</sup> Naval Criminal Investigative Service staff also told us they provided SBIR fraud training to some Navy personnel who review the SBIR and STTR applications. In addition to the measures outlined above, the DOD OIG has consistently submitted annual reports to congressional committees detailing the number of SBIR and STTR fraud, waste, and abuse investigations over the past year, the costs of those investigations, and other related items.

The division of duties between the military services' OIGs and their respective investigative services makes it difficult to track DOD's implementation of the requirements. The military services' OIGs are responsible for implementing the fraud, waste, and abuse prevention requirements; however, the investigative services, which generally investigate fraud, typically conduct several of the activities included in the SBIR and STTR fraud, waste, and abuse prevention requirements. Without the three military services' OIGs implementing the requirements themselves or delegating the implementation of the requirements to the investigative services, the DOD OIGs may not be able to detect fraud, waste, and abuse in DOD's SBIR and STTR programs, which have the largest budgets for these programs.

## Conclusions

Participating agencies and their OIGs have taken steps to implement many of their respective requirements that are designed to help the agencies prevent fraud, waste, and abuse in their SBIR and STTR programs. However, we found that the agencies have varied in their implementation of program requirements, and we identified four areas in which SBA's oversight or review of these requirements has been limited. First, SBA has not confirmed agencies' implementation of the minimum fraud, waste, and abuse prevention requirements. Without confirming that participating agencies are implementing the minimum fraud, waste, and

<sup>43</sup>The Air Force Materiel Command Law Office Procurement Fraud Division worked with the Air Force Office of Special Investigations to develop this fraud, waste, and abuse training. abuse prevention requirements in the policy directives by, for example, requesting documentation, SBA does not have reasonable assurance that each agency has a fraud, waste, and abuse prevention system in place to help reduce their vulnerability to fraud, waste, and abuse. Second, because SBA has not taken action since 2012 to review the requirements, it does not know whether they are effective or whether any revisions are needed. Given that we identified several areas in which agencies expressed confusion or implemented the requirements differently, SBA may need to more proactively solicit agency information. Third, because the fraud, waste, and abuse prevention requirement regarding "essentially equivalent work" is inconsistent with the definition earlier in the policy directives, SBA has no assurance that participating agencies are appropriately checking for such work that they fund as well as such work funded by other agencies. As a result, agencies may be at a higher risk of funding essentially equivalent work. Fourth, SBA has not evaluated the outcomes of the agencies' implementation of the fraud. waste, and abuse prevention requirements and therefore does not have reasonable assurance that the requirements are necessary, appropriate, and meet the intended purpose of preventing fraud, waste, and abuse in the SBIR and STTR programs.

Additionally, we found that HHS does not collect the life cycle certifications from award recipients to ensure that they are in compliance with specific program requirements. HHS is the only agency that does not collect copies of the certification forms. Without collecting copies of the certification forms, it may be more difficult to prosecute HHS SBIR or STTR awardees if they commit fraud, waste, or abuse.

With regard to the OIGs, DOD is the only agency in our review with multiple OIG offices and also multiple investigative services. However, the three military services' OIGs within DOD have not implemented all of the requirements or delegated them to the investigative services. The military services' OIGs are responsible for implementing the requirements, but the requirements include activities that are typically undertaken by the investigative services within DOD. Without the three military services' OIGs implementing the requirements themselves or delegating them to the investigative services, the DOD OIGs may not be able to detect fraud, waste, and abuse in DOD's SBIR and STTR programs, which have the largest budgets for these programs.

Recommendations for Executive Action	We are making six recommendations.
	To help improve agencies' implementation of the fraud, waste, and abuse prevention requirements in the policy directives, we recommend that the Administrator of SBA take the following four actions:
	<ul> <li>Confirm that each SBIR and STTR agency is implementing the minimum fraud, waste, and abuse prevention requirements in the policy directives, by, for example, requesting documentation from agencies.</li> </ul>
	• Request input from the participating agencies regarding the clarity of the requirements; review all of the SBIR and STTR minimum fraud, waste, and abuse prevention requirements, including the agency requirement to post information about successful SBIR or STTR fraud prosecutions; determine whether any additional guidance is needed; and revise the policy directives accordingly.
	• Revise the fraud, waste, and abuse provisions in the policy directives to reflect the definition of essentially equivalent work used elsewhere in the policy directives and require participating agencies to check for essentially equivalent work that they fund as well as such work funded by other agencies.
	• Evaluate SBIR and STTR agencies' fraud, waste, and abuse outcomes to ensure the fraud, waste, and abuse prevention requirements are appropriate and meet their intended purpose for the SBIR and STTR programs.
	To help improve the implementation of the fraud, waste, and abuse prevention requirements, we recommend that the Secretary of HHS direct the HHS SBIR and STTR program offices to collect copies of the self- certification forms from its SBIR and STTR awardees.
	To help ensure that DOD is implementing the fraud, waste, and abuse prevention requirements to the OIGs, we recommend that the Inspectors General of the Army, Navy, and Air Force implement the requirements themselves or delegate the implementation of the requirements to the investigative services.
Agency Comments and Our Evaluation	We provided a draft of this report to SBA and the 11 participating agencies for review and comment. Four agencies—SBA, HHS, DOD, and Education—provided written comments, which are reproduced in appendixes IV through VII. Five agencies—SBA, Commerce, DOD, DOT, and NSF—provided technical comments, which we incorporated, as appropriate. Five agencies—DHS, DOE, EPA, NASA, and USDA—had no technical or written comments.
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	DOD and SBA generally agreed with our recommendations, but HHS did not concur with the recommendation to collect the self-certifications from its SBIR and STTR awardees. Specifically, DOD stated that it concurred with our recommendation that the Army, Navy, and Air Force OIGs implement the fraud, waste, and abuse requirements themselves or delegate the implementation of the requirements to the investigative services, but provided no additional details.
	SBA generally agreed with GAO's four recommendations, and noted that it will do more to ensure that agencies are implementing the fraud, waste, and abuse requirements. For the first recommendation, SBA stated that it will request that each participating agency confirm their implementation of the minimum fraud, waste, and abuse prevention requirements. For the second recommendation, SBA stated it will contact all agencies in writing to inquire if additional clarity is needed regarding any of the fraud, waste, and abuse requirements, and, if necessary, will provide additional guidance. For the third recommendation, SBA stated that it will take steps to revise the fraud, waste, and abuse prevention requirements in the SBIR and STTR policy directives to reflect the definition of essentially equivalent work as noted in section 3 of the policy directives. For the fourth recommendation, SBA stated that it will survey the participating agencies regarding whether the requirements are necessary and meeting their intended purposes, are placing undue burdens on the agencies, or need to be revised, updated, or eliminated.
	While SBA generally agreed with our recommendations, it also noted in its comments that it does not have the legislative authority to conduct full- scale audits and assessments of each participating agency's fraud, waste, and abuse outcomes in the SBIR and STTR programs. As we stated in this report, the Small Business Act requires SBA to independently survey and monitor the operation of the SBIR and STTR programs within the participating agencies. Further, the policy directives state that SBA is responsible for ensuring that each participating agency has taken steps to maintain a fraud, waste, and abuse prevention system

to minimize their impact on the programs. We continue to believe that the Small Business Act and the policy directives require SBA to take an oversight role for the programs' fraud, waste, and abuse prevention requirements.

SBA's written comments also state that each participating agency has its own OIG that has the authority, expertise, and skill necessary to analyze whether that particular agency is effectively implementing fraud, waste, and abuse measures in its SBIR or STIR program, and suggested that many of the responsibilities that GAO recommends to SBA could be more effectively and efficiently handled by the OIGs. We agree that the OIGs have a role in preventing and detecting fraud and abuse in their agencies' programs and operations generally. However, as we found in this report, several agencies' OIGs and investigative services noted that the SBIR and STTR programs are often a lower priority because the programs represent a relatively small amount of money compared to other programs that their agencies fund, and that they need to prioritize their investigations in areas where the agencies spend more money. Because the Small Business Act and SBIR and STTR policy directives include requirements for SBA to monitor the operation of the programs and ensure agencies have taken steps to maintain fraud, waste, and abuse prevention systems, we believe the recommendations that we are making to SBA are appropriate.

In addition, SBA stated that none of the participating agencies had communicated ambiguity in or a misunderstanding of any fraud, waste, and abuse requirements, and thus SBA was unaware of the need to clarify these requirements. We agree that agencies had not raised issues about the requirements with SBA, and state this in the report. However, in interviews with agency program officials about the requirements during this review, we identified areas where the agencies were implementing the requirements differently and program officials confirmed that parts of the requirements were unclear. In some cases, program officials asked us how they were supposed to implement these requirements. Such questions and variation in the implementation show that there is ambiguity in the requirements or misunderstanding among agencies.

In its comments, HHS raised three issues explaining why it did not concur with our recommendation. First, HHS stated that it has implemented the requirements in the policy directives for life cycle certifications. As noted in our report, HHS requires that awardees complete certifications and keep them on file and available for review. However, the fraud, waste, and abuse prevention requirements state that agencies are to require certifications from award recipients during the life cycle of the award. Further, the section of the policy directives that contains the certification templates states that the forms are to be submitted by the applicant to the contracting or granting agency. We do not believe that HHS has fully implemented this requirement because HHS does not require awardees to submit the certifications to HHS. Without collecting the life cycle certifications, HHS has no assurance that awardees have completed them.

Second, HHS stated that the agency cannot accurately determine when certifications are due to collect them because its financial data is typically 45 days in arrears. Award recipients are required to complete life cycle certifications at three different financial milestones: when receiving the final payment for a Phase I award, prior to receiving 50 percent of the total amount for a Phase II award, and prior to the final payment for a Phase II award. There is no specific timeframe for agencies to collect the certifications, and we see no issue with collecting them within 45 days of these financial milestones. HHS also stated that requiring grantees to submit certifications would create a substantial administrative burden. HHS does not explain, however, why if the recipient has to fill out the certification form in any case, submitting the form is likely to be a significant additional administrative burden. Also, as noted in the report, all of the participating agencies-with the exception of HHS-collect the certifications from awardees, and none mentioned to us that it created a significant administrative burden.

Third, HHS stated that grant fraud cases, including those for the SBIR or STTR programs, have been successfully prosecuted without grantees proactively submitting life cycle certifications. However, as stated in this report, HHS OIG officials told us that they raised concerns to HHS SBIR staff about the practice of allowing awardees to maintain the certifications at their small businesses instead of submitting them to the agency. In addition, OIG officials from most of the participating agencies told us that they use these certifications to show the intent to commit fraud, if any fraud occurs later, because the small businesses are certifying the accuracy and truth of the information they are submitting to the agency. We continue to believe that taking steps to collect the certifications from SBIR and STTR awardees would bring HHS into full compliance with this requirement, and would provide HHS with better assurance that the awardees understand and agree to the terms of the contract. We therefore continue to believe that it is important for HHS to collect the signed life cycle certification forms from small businesses and retained the recommendation.

We are sending copies of this report to the appropriate congressional committees; the Secretaries of Agriculture, Commerce, Defense, Education, Energy, Health and Human Services, Homeland Security, and Transportation; the Administrators of the Small Business Administration, the Environmental Protection Agency, and the National Aeronautics and Space Administration; the Director of the National Science Foundation; the Inspectors General of the Army, Air Force, and Navy; and other interested parties. In addition, the report is available at no charge on the GAO website at http://www.gao.gov.

If you or your staff members have any questions about this report, please contact me at (202) 512-3841 or NeumannJ@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix VIII.

John Neumann Director, Natural Resources and Environment

#### List of Committees

The Honorable James Risch Chairman The Honorable Jeanne Shaheen Ranking Member Committee on Small Business and Entrepreneurship United States Senate

The Honorable Lamar Smith Chairman The Honorable Eddie Bernice Johnson Ranking Member Committee on Science, Space, and Technology House of Representatives

The Honorable Steve Chabot Chairman The Honorable Nydia M. Velázquez Ranking Member Committee on Small Business House of Representatives

# Appendix I: Objectives, Scope and Methodology

This report examines the extent to which (1) participating agencies and the Small Business Administration (SBA) have implemented fraud, waste, and abuse prevention requirements in the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs and (2) OIGs have implemented fraud, waste, and abuse prevention requirements in the SBIR and STTR programs.

To answer our first objective, we reviewed relevant laws and directives, including the reauthorization act for the SBIR and STTR programs (reauthorization act)<sup>1</sup> and the SBIR and STTR policy directives,<sup>2</sup> and our prior report on SBIR and STTR fraud, waste, and abuse issues.<sup>3</sup> We requested and reviewed documentation from the 11 participating agencies on their actions to address fraud, waste, and abuse and to implement the requirements and compared this information to the requirements in the policy directives. We focused on steps taken since 2012 because that was the first year that the fraud, waste, and abuse prevention requirements for agencies contained in the policy directives went into effect. We assessed agencies' implementation of the requirements but not the effectiveness of their implementation. We determined that an agency had fully implemented a requirement if the agency could demonstrate, through interviews with agency officials and documentation provided by them, as appropriate, that it had fully implemented each part of the requirement. We determined that an agency partially implemented a requirement if the agency could demonstrate, through interviews with agency officials and documentation provided by them, as appropriate, that it had at least implemented one part of the requirement. We determined that an agency had not implemented the requirement if it could not provide evidence for implementing any part of that requirement. We limited our review of the Departments of Defense (DOD) and Health and Human Services (HHS) to the components that spent more than \$100 million on SBIR and STTR in fiscal year 2014, the last year that we had data at the start of our review. For DOD, this includes the three military departments-Army, Air

<sup>1</sup>SBIR/STTR Reauthorization Act of 2011, Pub. L. No. 112-81, div. E, tit. LI, § 5143(a)(2), 125 Stat. 1298, 1854 (codified at 15 U.S.C. § 638b(a)(2) (2017)).

<sup>2</sup>Small Business Administration, *Small Business Innovation Research (SBIR) Program Policy Directive* (Washington, D.C.: Feb. 24, 2014), and *Small Business Technology Transfer (STTR) Program Policy Directive* (Washington, D.C.: Feb. 24, 2014).

<sup>3</sup>GAO, Small Business Research Programs: Agencies Are Implementing New Fraud, Waste, and Abuse Requirements, GAO-13-70R (Washington, D.C.: Nov. 15, 2012).

Force, and Navy—that comprise 70 percent of DOD's SBIR and STTR programs. We also included the Office of the Secretary of Defense, which oversees the SBIR and STTR programs for all DOD components. For HHS, our review includes the National Institutes of Health, which comprises 98 percent of HHS's SBIR and STTR programs. Further, we requested and reviewed information from SBA to determine the actions SBA has taken to oversee the agencies' efforts related to fraud, waste, and abuse. In addition, we interviewed program managers from SBA and the participating agencies regarding their actions to address fraud, waste, and abuse in the programs using a standard set of interview questions. To characterize views throughout the report, we defined modifiers to quantify officials' views as follows:

- "Most" agencies represents 7 or more agencies' officials.
- "Several" agencies represents 5 to 6 agencies' officials.
- "Some" agencies represents 3 to 4 agencies' officials

To address our second objective, we reviewed the requirements for fraud, waste, and abuse for the participating agencies' OIGs in the reauthorization act.<sup>4</sup> We requested and reviewed documentation from the 11 participating agencies' OIGs on their actions to address the fraud, waste, and abuse prevention requirements and compared this information to the requirements in the reauthorization act. We focused on steps taken since 2012 because that was the first full year that the fraud, waste, and abuse prevention requirements for OIGs went into effect. We assessed OIGs' implementation of the requirements but not the effectiveness of their implementation. We determined that an OIG had fully implemented a requirement if it could provide documentation that it had fully implemented each part of the requirement. We determined that an OIG partially implemented the requirement if it could provide documentation that had at least implemented one part of the requirement. We determined that an OIG had not implemented the requirement if it could not provide evidence for implementing any part of that requirement. In addition, we interviewed SBA and participating agencies' OIG and investigative staff who have worked on SBIR and STTR reviews and investigations regarding their actions to address fraud, waste, and abuse in the programs, using a standard set of interview questions. To characterize views throughout the report, we defined modifiers to quantify officials' views as follows:

<sup>&</sup>lt;sup>4</sup>SBIR/STTR Reauthorization Act of 2011, § 5143(a)(5).

- "Most" OIGs represents 7 or more OIGs' officials.
- "Several" OIGs represents 5 to 6 OIG's officials.
- "Some" OIGs represents 3 to 4 OIGs' officials

To help inform both objectives, we conducted interviews with a nongeneralizable sample of 11 small businesses to obtain information on their experiences with, and knowledge of, fraud, waste, and abuse prevention activities by agencies and the challenges the small businesses faced regarding the SBIR and STTR fraud, waste, and abuse prevention requirements. To select these 11 small businesses, we used publicly available data on SBIR and STTR awardees available on SBA's SBIR and STTR program website (www.SBIR.gov). We downloaded a list of all of the SBIR or STTR awards by any agency in 2012 through 2016. We selected 2012 as the beginning year because it was the year that agencies started implementing the new fraud, waste, and abuse prevention provisions required by the policy directives for the programs. We identified the small businesses that had received awards from at least 3 agencies and prepared a spreadsheet for each agency that listed all of the small businesses that had received at least three awards, including at least one from that agency. We focused on small businesses that had received SBIR or STTR awards from at least 3 agencies since 2012 to maximize the number of agencies with which the small businesses had experience. We used a random number generator to assign random numbers to each of the small businesses on each agency list and sorted the lists by the randomly generated numbers. We contacted the first small business on each agency's list to request an interview. If we did not receive a response from the small business after three attempts, we contacted the next small business on the list until we received a response. The information collected from these small businesses is anecdotal and cannot be generalized to all small businesses that receive SBIR or STTR awards, but provide illustrative examples of small businesses' experiences with the fraud, waste, and abuse prevention requirements.

We conducted this performance audit from April 2016 to April 2017 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

#### Appendix II: Agency Implementation of Small Business Innovation Research and Small Business Technology Transfer Fraud, Waste, and Abuse Prevention Requirements

The 2011 reauthorization of the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs (reauthorization act) required the Small Business Administration (SBA) to add fraud, waste, and abuse prevention requirements to the policy directives for agencies to implement.<sup>1</sup> The policy directives for each program contain the same requirements. Table 1 contains our assessment of each agency's implementation of the requirements as of December 2016 based on documentation provided by the agencies and interviews with agency officials. Further, we assessed agencies' implementation. We focused our review on whether the agency had taken any action to implement the requirement. The full text of the requirements, as they appear in the Policy Directives for the programs, is as follows:

At a minimum, agencies must:

- Require certifications from award recipients that they are in compliance with specific program requirements at the time of the award, as well as after the award and during the life cycle of the funding agreement.
- Include information explaining how an individual can report fraud, waste, and abuse on the agency's respective program website and in each funding solicitation using the method provided by the agency's Office of the Inspector General (OIG), such as publishing the agency's fraud hotline number.
- Designate at least one individual in the agency to, at a minimum, serve as the liaison for the SBIR or STTR program, the OIG, and the agency's Suspension and Debarment Official and ensure that inquiries regarding fraud, waste, and abuse are referred to the appropriate office.
- Include on its program website information concerning successful prosecutions of fraud, waste, and abuse in the programs.
- Establish a written policy requiring all personnel involved with the program to notify the OIG if anyone suspects fraud, waste, and/or abuse and ensure the policy is communicated to all personnel.

<sup>&</sup>lt;sup>1</sup>SBIR/STTR Reauthorization Act of 2011, Pub. L. No. 112-81, div. E, tit. LI, § 5143(a)(1), 125 Stat. 1298, 1855 (codified at 15 U.S.C. § 638b (2017)).

Appendix II: Agency Implementation of Small Business Innovation Research and Small Business Technology Transfer Fraud, Waste, and Abuse Prevention Requirements

- Create or ensure there is an adequate system to enforce accountability by developing separate standardized templates for referrals to the OIG and the suspension and debarment official, as well as a process for tracking such referrals.
- Ensure compliance with program eligibility requirements and terms of funding agreements.
- Work with the agency's OIG in its efforts to establish fraud detection indicators;<sup>2</sup> coordinate sharing of information on fraud, waste, and abuse between federal agencies; and improve education and training to program officials, applicants, and award recipients.
- Develop policies and procedures to avoid funding essentially equivalent work already funded by another agency.
- Consider enhanced reporting requirements during the funding agreement.

We limited our review of the Departments of Defense (DOD) and Health and Human Services (HHS) to the components that spent more than \$100 million on the SBIR and STTR programs in fiscal year 2014, the last year for which we had data at the start of our review. As such, we limited our review of DOD's efforts to the three military departments—Army, Air Force and Navy—that comprise 70 percent of DOD's SBIR and STTR programs. We also included the Office of the Secretary of Defense, which oversees the SBIR and STTR programs for all DOD components. Additionally, we limited our review of HHS's program to the National Institutes of Health, which comprises 98 percent of HHS's SBIR and STTR programs.

<sup>&</sup>lt;sup>2</sup>Concealed liabilities and expenses on a financial statement is an example of a fraud detection indicator.

Appendix II: Agency Implementation of Small Business Innovation Research and Small Business Technology Transfer Fraud, Waste, and Abuse Prevention Requirements

Table 1: Status of Agencies' Implementation of Fraud, Waste, and Abuse Prevention Requirements for the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Programs

	Require certifications from awardees <sup>a</sup>	Include how to report fraud, waste, and abuse on website and solicitation <sup>b</sup>	Designate liaison for Office of Inspector General (OIG) and Suspension and Debarment Official <sup>c</sup>	fraud	Written policy to notify OIG of suspected fraud, waste, and abuse <sup>e</sup>	for referrals	requirements	Coordinate with OIG on fraud, waste, and abuse efforts <sup>h</sup>	Develop policies to avoid funding essentially equivalent work <sup>i</sup>	Consider enhanced reporting requirements <sup>i</sup>
Department of Agriculture (USDA)	$\bullet$	٠	•	0	0	•	٠	•	0	0
Department of Commerce	•	٠	٠	igodot	٠	0	٠		٠	$\bigcirc$
Department of Defense (DOD) <sup>k</sup>	0	•	•	$\bigcirc$	0	$\bigcirc$	٠	0	0	•
Department of Education	•	٠	•	0	•	•	٠	$\bigcirc$	٠	•
Department of Energy (DOE)	•	٠	•	٠	•	•	٠	$\bigcirc$	٠	•
Health and Human Services (HHS) <sup>I</sup>	0	٠	٠	٠	٠	$\bullet$	٠	٠	٠	٠
Department of Homeland Security (DHS)	•	٠	٠	٠	٠	$\bigcirc$	$\bigcirc$		٠	•
Department of Transportation (DOT)	•	٠	٠	0	٠	0	٠	0	0	•
Environmental Protection Agency (EPA)		•	•	•	•	0	•	0	•	•

Appendix II: Agency Implementation of Small Business Innovation Research and Small Business Technology Transfer Fraud, Waste, and Abuse Prevention Requirements

	Require certifications from awardees <sup>a</sup>	Include how to report fraud, waste, and abuse on website and solicitation <sup>b</sup>	Designate liaison for Office of Inspector General (OIG) and Suspension and Debarment Official <sup>c</sup>	List examples of successful fraud prosecutions on website <sup>d</sup>	Written policy to notify OIG of suspected fraud, waste, and abuse <sup>e</sup>	Develop templates for referrals to OIG and Suspension and Debarment Official <sup>f</sup>	Ensure compliance with eligibility requirements and funding agreements <sup>9</sup>	Coordinate with OIG on fraud, waste, and abuse efforts <sup>h</sup>	Develop policies to avoid funding essentially equivalent work <sup>i</sup>	Consider enhanced reporting requirements <sup>j</sup>
National Aeronautics and Space Administration (NASA)	$\bigcirc^{m}$	٠	٠	•	•	٠	٠	٠	•	٠
National Science Foundation (NSF)	•	٠	٠	٠	•	$\bigcirc$ <sup>n</sup>	٠	٠	٠	٠

• Fully implemented requirement • Partially implemented requirement • Did Not implement requirement

Source: GAO analysis of participating agencies' data | GAO-17-337.

Note: In general, we determined that an agency had fully implemented a requirement if agency officials could demonstrate, through interviews with agency officials and documentation provided by them, as appropriate, that it had fully implemented each part of the requirement. We determined that an agency partially implemented a requirement if it could demonstrate, through interviews with agency officials and documentation provided by them, as appropriate, that it had at least implemented one part of the requirement. We determined that an agency partially implemented, that it had at least implemented one part of the requirement. We determined that an agency had not implemented a requirement if it could not provide evidence for implementing any part of that requirement.

<sup>a</sup>We determined that an agency had fully implemented this requirement if agency officials could provide documentation, including model or redacted agreements, demonstrating that it required awardees to provide certifications matching the templates in the SBIR and STTR policy directives at the time of award, at the time of final payment or disbursement of Phase I funding, prior to receiving more than 50 percent of Phase II funding, and prior to final payment or disbursement of Phase II funding.

<sup>b</sup>We determined that an agency had fully implemented this requirement if information on how to report fraud, waste, and abuse was presented on an agency's SBIR, STTR, or both websites and if agency officials could demonstrate that the agency's most recent program solicitation included this information.

<sup>o</sup>We determined that an agency had fully implemented this requirement if agency officials could identify one or more liaisons to their Office of Inspector General and Suspension and Debarment Official. The Office of the Inspector General and Suspension and Debarment Official liaisons' role is to investigate any alerts of fraud, waste, and abuse and when appropriate, proceed with criminal or administrative remedies, such as prosecution or debarment from receiving federal funds.

<sup>d</sup>We determined that an agency had fully implemented this requirement if information regarding successful SBIR and/or STTR prosecutions was presented on an agency's SBIR, STTR, or both websites.

<sup>e</sup>We determined that an agency had fully implemented this requirement if agency officials could provide a written policy, whether program specific or agency-wide, requiring all personnel to notify their Office of Inspector General if they suspected fraud, waste, and abuse and if the officials could demonstrate that the policy had been communicated to all program personnel.

<sup>f</sup>We determined that an agency had fully implemented this requirement if agency officials could provide separate standardized templates, whether program specific or agency-wide, for Office of Inspector General and Suspension and Debarment Official referrals and could demonstrate a process for tracking such referrals.

<sup>9</sup>We determined that an agency had fully implemented this requirement if agency officials could demonstrate or describe a detailed process for ensuring compliance with eligibility requirements.

<sup>h</sup>We determined that an agency had fully implemented this requirement if it could document communication between program staff and Office of Inspector General staff, or if program officials and Office of Inspector General officials independently agreed that there had been collaboration, on each of five topics: (1) establishment of fraud indicators, (2) information sharing between federal agencies, (3) education or training of program staff, (4) education or training of program applicants, and (5) education or training of program awardees.

We determined that an agency had fully implemented this requirement if it could demonstrate policies and procedures to avoid funding essentially equivalent work, whether program specific or agencywide.

<sup>j</sup>We determined that an agency had fully implemented this requirement if agency officials told us that they had considered or implemented enhanced reporting requirements for program awardees.

<sup>k</sup>Our assessment of the SBIR and STTR fraud, waste, and abuse requirements at DOD included three DOD components in our review—Army, Air Force, and Navy.

Our assessment of the SBIR and STTR fraud, waste, and abuse requirements at HHS included one HHS component—the National Institutes of Health.

<sup>m</sup>NASA is receiving partial credit for the required certifications from awardees because NASA is not using the exact language in the self certifications from the small businesses, as required in the policy directive. However, NASA officials told us that they have updated the language for the selfcertifications based on lessons learned from prosecuting SBIR fraud cases, which is why NASA is using different language for the certifications than that provided in the policy directives.

<sup>n</sup>NSF is receiving partial credit for the required templates for the OIG and the Suspension and Debarment Official because NSF agency officials do not have a template for making referrals to the Suspension and Debarment Official. NSF OIG officials provided information on how they make referrals to the Suspension and Debarment Official, but because this requirement is directed at the agency staff and calls specifically for a template, NSF received partial credit for this requirement.

#### Appendix III: Offices of Inspectors General Implementation of Small Business Fraud, Waste, and Abuse Prevention Requirements

The 2011 reauthorization of the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs (reauthorization act) included five fraud, waste, and abuse prevention requirements for the participating Offices of the Inspectors General (OIG) to implement.<sup>1</sup> The table below contains our assessment of each OIG's implementation of the requirements as of December 2016 based on documentation provided by the OIGs and interviews with OIG officials. Further, we assessed the OIGs' implementation of the requirements but not the effectiveness of their implementation. We focused our review on whether the agency OIG had taken any action to implement the requirement. The full text of the requirements, as they appear in the statute reauthorizing the programs, is as follows:

The Inspector General of each Federal agency that participates in the SBIR program or STTR program shall cooperate to prevent fraud, waste, and abuse in the SBIR program and the STTR program by:

- Establishing fraud detection indicators.
- Reviewing regulations and operating procedures of the Federal agency.
- Coordinating information sharing between Federal agencies, to the extent otherwise permitted under federal law.
- Improving the education and training of and outreach to:
  - administrators of the SBIR program and the STTR program of the Federal agency;
  - applicants to the SBIR program or the STTR program; and
  - recipients of awards under the SBIR or STTR program.

<sup>&</sup>lt;sup>1</sup>SBIR/STTR Reauthorization Act of 2011, Pub. L. No. 112-81, div. E, tit. LI, § 5143(a)(5), 125 Stat. 1298, 1855 (codified at 15 U.S.C. § 638b (2017)).

Table 2: Summary of Offices of the Inspectors General (OIG) Implementation of Fraud, Waste, and Abuse Prevention Requirements for the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Programs

	Establish fraud detection indicators <sup>a</sup>	Review regulations and operating procedures <sup>b</sup>	Coordinate information sharing between agencies <sup>c</sup>	Training and education on fraud, waste, and abuse <sup>d</sup>	Training Administrators <sup>e</sup>	Training for Applicants <sup>f</sup>	Training for Awardees <sup>g</sup>
Department of Agriculture (USDA)	•	$\bigcirc$	•	$\bigcirc$	•	0	•
Department of Commerce	•	0	•	0	0	0	0
Department of Defense (DOD) <sup>h</sup>	•	$\bigcirc$	•	$\bigcirc$	•	0	0
Department of Education	•	•	•	•	•	•	•
Department of Energy (DOE)	•	•	•	•	•	•	•
Health and Human Services (HHS)	•	•	•	•	٠	•	•
Department of Homeland Security (DHS)	•	Oʻ	•	$\bigcirc$	0	•	•
Department of Transportation (DOT)	•	0	•	$\bigcirc$	•	•	0
Environmental Protection Agency (EPA)	•	•	•	$\bigcirc$	٠	0	•
National Aeronautics and Space Administration (NASA)	۲	٠	٠	۲	٠	•	٠
National Science Foundation (NSF)	٠	•	•	٠	۲	•	٠

• Fully implemented requirement, • Partially implemented requirement, O Did Not implement requirement

Source: GAO analysis of participating agencies' OIG data. | GAO-17-337.

Note: In general, we determined that an OIG had fully implemented a requirement if it could provide documentation that it had fully implemented each part of the requirement. We determined that an OIG partially implemented the requirement if it could provide documentation that it had at least implemented one part of the requirement. We determined that an OIG had not implemented the requirement if it could not provide evidence for implementing any part of that requirement.

<sup>a</sup>We determined that an OIG had fully implemented this requirement if OIG officials could provide fraud indicators it had developed or showed that it had elected to use fraud indicators developed by another OIG. Fraud indicators could be program specific or agency-wide.

<sup>b</sup>We determined that an OIG had fully implemented this requirement if OIG officials could provide documentation or a detailed description of a recent review, such as an audit, of program regulations and operating procedures.

<sup>°</sup>We determined that an OIG had fully implemented this requirement if OIG officials could provide documentation or a detailed description of information sharing, such as participation in an interagency working group, between federal agencies.

<sup>d</sup>We determined that an OIG had fully implemented this requirement if OIG officials could demonstrate that it had provided education, training or outreach to program staff, applicants, and awardees.

<sup>e</sup>We determined that an OIG had fully implemented this requirement if OIG officials could demonstrate that it had provided education, training, or outreach to program staff.

<sup>f</sup>We determined that an OIG had fully implemented this requirement if OIG officials could demonstrate that it had provided education, training, or outreach to program applicants.

<sup>9</sup>We determined that an OIG had fully implemented this requirement if OIG officials could demonstrate that it had provided education, training, or outreach to program awardees.

<sup>h</sup>The DOD OIGs have overall responsibility for implementing these requirements under the reauthorization act. However, the responsibilities for investigating fraud, which are typically found within the other participating agencies' OIGs, are separate for DOD and are located instead in specific investigative services. We found that the three DOD investigative services in our review have implemented several of the SBIR and STTR fraud, waste, and abuse requirements, as noted in our report. However, the table above reflects only the work that the DOD OIG has done to implement the requirements. We found that the DOD component OIGs had not done anything to implement these requirements.

<sup>i</sup>DHS OIG completed a review of the DHS SBIR program in 2010, but it has not done another review since the fraud, waste, and abuse requirements went into effect in 2012.

## Appendix IV: Comments from the Small Business Administration



SBA has evaluated the policy directives to determine if aspects of the policy directives are unclear. SBA issued amendments to the policy directives in 2014 and is again, currently, in the process of clarifying the policy directives. None of the participating agencies have ever communicated ambiguity in or a misunderstanding of any fraud, waste, and abuse requirements, and thus SBA was unaware of the need to clarify these requirements. SBA generally agrees with the recommendations to SBA. SBA has the following comments related to GAO's recommendations to SBA. (1) Confirm that each SBIR and STTR agency is implementing the minimum fraud, waste, and abuse prevention requirements in the policy directives, by, for example requesting documentation from agencies. SBA will request that each participating agency confirm their implementation of the minimum fraud, waste, and abuse prevention requirements. (2) Request input from the participating agencies regarding the clarity of the requirements; review all of the SBIR and STTR minimum fraud, waste, and abuse prevention requirements, including the agency requirement to post information about successful SBIR or STTR fraud prosecutions; determine whether any additional guidance is needed; and revise the policy directives accordingly. As noted in the draft report, SBA holds bi-monthly SBIR/STTR Program Manager meetings. FWA has been a topic of discussion at these meetings and SBA provides Program Managers the opportunity to raise any question unrelated to the agenda topics. SBA has not received any feedback from the participating agencies regarding ambiguity in the fraud, waste, and abuse prevention requirements either through the Program Manager meetings or through other means of communication. The report however, notes that a few agencies indicated that they require additional clarification on a few of these requirements. SBA will contact all agencies in writing to inquire if additional clarity is needed regarding any of the fraud, waste, and abuse requirements. If necessary, additional guidance will be provided. (3) Revise the fraud, waste, and abuse provisions in policy directives to reflect the definition of essentially equivalent work used elsewhere in the policy directives and require participating agencies to check for essentially equivalent work they fund as well as such work funded by other agencies. SBA will take steps to revise the SBIR and STTR Policy Directives to reflect the definition of essentially equivalent work as noted in section 3 of the policy directives. SBA will work with all parties to determine how to best address the issue of duplication. This is an important issue and a high priority for all parties involved.

(4) Evaluate SBIR and STTR agencies' fraud, waste, and abuse outcomes to ensure the fraud, waste, and abuse prevention requirements are appropriate and meet their intended purpose for the SBIR and STTR Programs. Congress directed SBA to amend the SBIR and STTR policy directives to include measures to prevent fraud, waste, and abuse, and to develop, in consultation with the OIGs, procedures and requirements for fraud, waste, and abuse certifications. 15 U.S.C. § 638b(a)(1)-(4). SBA has complied with this mandate by developing the fraud, waste, and abuse requirements in the policy directives. GAO recommends that SBA undertake an evaluation of fraud, waste, and abuse outcomes at the participating agencies to ensure that the requirements are appropriate to meet their purpose. SBA will survey the participating agencies regarding whether the requirements are necessary and meeting their intended purposes, are placing undue burdens on the agencies, or need to be revised, updated, or eliminated. Thank you for the opportunity to comment on this report and for taking our views into consideration. Sincerely, John R. Williams Director Office of Innovation and Technology

### Appendix V: Comments from the Department of Health and Human Services

DEPARTMENT OF	HEALTH & HUMAN SERVICES	OFFICE OF THE SECRETARY
Shelwasa C		Assistant Secretary for Legislation Washington, DC 20201
MAR 2 4 2017		
John Neumann Director, Natural Resources a U.S. Government Accountab 441 G Street NW Washington, DC 20548		
Dear Mr. Neumann:		
	ograms: Additional Actions Ne	lity Office's (GAO) report entitled, eded to Implement Fraud, Waste,
The Department appreciates t	he opportunity to review this re	eport prior to publication.
	Sincerely,	
	Barbar	a Produs U auk
	Barbara Pisaro Acting Assistar	Clark It Secretary for Legislation
Attachment		
Attachment		at Secretary for Legislation





**GENERAL COMMENTS OF THE DEPARTMENT OF HEALTH AND HUMAN** SERVICES (HHS) ON THE GOVERNMENT ACCOUNTABILITY OFFICE'S DRAFT **REPORT ENTITLED: SMALL BUSINESS RESEARCH PROGRAMS: ADDITIONAL** ACTIONS NEEDED TO IMPLEMENT FRAUD, WASTE, AND ABUSE PREVENTION **REQUIREMENTS (GAO-17-337)** termination if we find that an awardee is not in compliance with the requirements surrounding the Life Cycle Certifications. Therefore, NIH respectfully does not agree that collecting the Life Cycle Certifications provides further improvement of the fraud, waste, and abuse prevention.

### Appendix VI: Comments from the Department of Defense

OFFICE OF THE UNDER SECRETARY OF DEFENSE 3000 DEFENSE PENTAGON WASHINGTON, DC 20301-3000 March 23, 2017 ANDLOGISTI Mr. John Neumann Director, Natural Resources & Environment U.S. Government Accountability Office 441 G Street, N.W. Washington, DC 20548 Dear Mr. Neumann: This is the Department of Defense (DoD) response to the Government Accountability Office (GAO) Draft Report, GAO-17-337, "SMALL BUSINESS RESEARCH PROGRAMS: Additional Actions Needed to Implement Fraud, Waste, and Abuse Prevention Requirements" dated February 14, 2017 (GAO Code 100781). Detailed comments on the report recommendations are enclosed. Sincerely, om & James J. Galvin, Jr. Acting Director, Office of Small business Programs Enclosure: As stated

"SMALL BUSINESS RESEARCH PROGRAMS: ADDITIONAL ACTIONS NEEDED TO IMPLEMENT FRAUD, WASTE, AND ABUSE PREVENTION REQUIREMENTS" DEPARTMENT OF DEFENSE COMMENTS TO THE GAO RECOMMENDATION RECOMMENDATION: To help ensure that DOD is implementing the fraud, waste, and abuse prevention requirements to the Offices of the Inspector Generals (OIG), the GAO recommends hat the Inspectors General of the Army, Navy, and Air Force implement the requirements hemselves or delegate the implementation of the requirements to the investigative services.	GAO	) Draft Report Dated February 14, 2017 GAO-17-337 (GAO CODE 100781)
<b>TO THE GAO RECOMMENDATION</b> <b>RECOMMENDATION:</b> To help ensure that DOD is implementing the fraud, waste, and abuse prevention requirements to the Offices of the Inspector Generals (OIG), the GAO recommends hat the Inspectors General of the Army, Navy, and Air Force implement the requirements hemselves or delegate the implementation of the requirements to the investigative services.	"SMALL BUSINESS RESI	EARCH PROGRAMS: ADDITIONAL ACTIONS NEEDED
prevention requirements to the Offices of the Inspector Generals (OIG), the GAO recommends hat the Inspectors General of the Army, Navy, and Air Force implement the requirements hemselves or delegate the implementation of the requirements to the investigative services.		
DoD RESPONSE: Concur.	prevention requirements to the that the Inspectors General of t	e Offices of the Inspector Generals (OIG), the GAO recommends the Army, Navy, and Air Force implement the requirements
	DoD RESPONSE: Concur.	

## Appendix VII: Comments from the Department of Education





3 3. In response to the requirement that agencies coordinate with the OIG on fraud, waste, and abuse efforts: The Institute's website has been updated to include language that directs applicants (in addition to awardees and Department staff) to the training on SBIR fraud awareness. The website is available at: http://ies.ed.gov/sbir/disclaimer.asp. We would also be glad to explore other ways to coordinate with the OIG on fraud, waste, and abuse efforts. The Institute will continue to work closely with the SBA to ensure that we comply with any new or revised requirements, guidance, or policy directives related to the SBIR program. Thank you again for the opportunity to review the draft report. Sincerely, thomas Bond Thomas Brock Commissioner for Education Research, Delegated the Duties of the Director

#### Appendix VIII: GAO Contact and Staff Acknowledgments

GAO Contact	John Neumann, (202) 512-3841 or neumannj@gao.gov
Staff Acknowledgments	In addition to the contact named above, Hilary Benedict (Assistant Director), Matt Ambrose, Lisa Brown, Greg Campbell, Antoinette Capaccio, Justin Fisher, Cindy Gilbert, Kirsten Jacobson, TyAnn Lee, Rebecca Makar, and Sara Sullivan made key contributions to this report.

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