



September 2019

# SMALL BUSINESS RESEARCH PROGRAMS

## Many Agencies Took Longer to Issue Small Business Awards than Recommended

## Why GAO Did This Study

Since the SBIR and STTR programs began in 1982 and 1992, respectively, federal agencies have awarded at least 162,000 contracts and grants totaling around \$46 billion to help small businesses develop and commercialize new technologies. Eleven agencies participate in the SBIR program and five of them also participate in the STTR program. Each agency issues a solicitation requesting proposals at least once a year. Agencies then review proposal submissions and issue awards using grants or contracts. The SBIR and STTR policy directive recommends that most agencies issue awards no more than 180 calendar days from solicitation close.

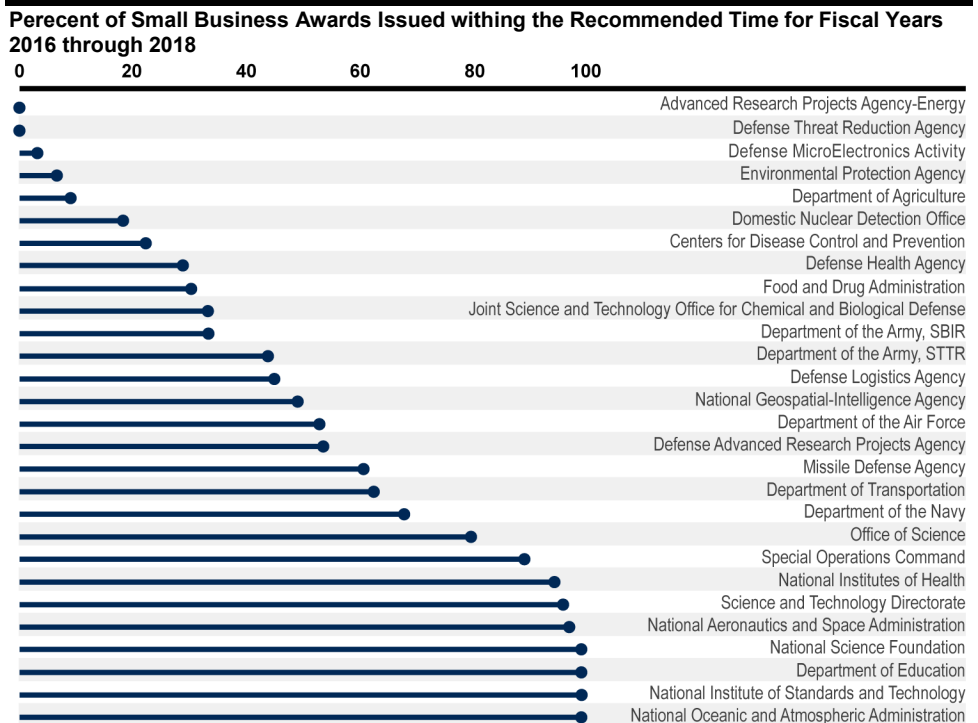
The John S. McCain National Defense Authorization Act for Fiscal Year 2019 included a provision for GAO to report on the timeliness of agencies' SBIR and STTR proposal review and award issuance. This report examines the time agencies spend issuing SBIR and STTR awards and the factors that affect the time spent, among other things. Within the 11 agencies, GAO reviewed 28 component agencies that participate in these programs. GAO analyzed agency-provided award data from fiscal years 2016 to 2018 for 15,453 awards and interviewed officials from the Small Business Administration and 26 of the component agencies.

# SMALL BUSINESS RESEARCH PROGRAMS

## Many Agencies Took Longer to Issue Small Business Awards than Recommended

### What GAO Found

In fiscal years 2016 through 2018, agencies issued 11,710 of the 15,453 Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) awards we reviewed (76 percent) within the recommended time period. However, component agencies varied in the percentage of awards that they issued within the recommended time (see figure).



Source: GAO analysis of Small Business Innovation Research and Small Business Technology Transfer award data. | GAO-19-620

Note: The policy directive for the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs recommends agencies issue awards within 180 days, except for the the National Institutes of Health and National Science Foundation, which should issue awards within 15 months.

Agency officials described a number of factors that can affect award issuance timelines, including:

- Some agencies use cost reimbursement contracts, which require additional agency review under federal acquisition regulations.
- Some contracting officers have limited expertise in issuing SBIR and STTR awards and their overall workloads can be heavy.
- Small businesses may be slow to respond to agency requests for information, such as requests for information needed to meet government contracting requirements.

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Figure 1: Number and Issuance Time for Fixed Price and Cost Reimbursement Contracts

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**Abbreviations**

CDC	Centers for Disease Control and Prevention
DARPA	Defense Advanced Research Projects Agency
FY	Fiscal year
FDA	Food and Drug Administration
NIH	National Institutes of Health
NSF	National Science Foundation
R&D	Research and Development
SBA	Small Business Administration
SBIR	Small Business Innovation Research
STTR	Small Business Technology Transfer

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September 26, 2019

Congressional Committees:

Congress established the Small Business Innovation Research (SBIR) program in 1982 to enable federal agencies to support research and development (R&D) projects carried out by small businesses.<sup>1</sup> For example, an SBIR award from the Department of Health and Human Services helped a small business develop glasses that allow people with color vision deficiency to see the full color palette, and this business has made more than \$20 million in annual sales, according to information on the SBIR website. Congress established the related Small Business Technology Transfer (STTR) program in 1992.<sup>2</sup> The SBIR and STTR programs are similar in that participating agencies identify topics and make awards for R&D projects led by small businesses. The STTR program further requires the small business to partner with a nonprofit research institution, such as a college, university, or federally funded research and development center. Each year, small businesses may apply for SBIR and STTR awards to develop and commercialize innovative technologies.<sup>3</sup> The awards generally do not exceed \$150,000 for the initial award and \$1 million for subsequent follow-on awards.<sup>4</sup>

Federal agencies with obligations of \$100 million or more for extramural R&D are required to participate in the SBIR program, and those with such obligations of \$1 billion or more are also required to participate in the

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<sup>1</sup>Small Business Innovation Development Act of 1982, Pub. L. No. 97-219, 96 Stat. 217 (1982).

<sup>2</sup>Small Business Technology Transfer Act of 1992, Pub. L. No. 102-564, Tit. II, 106 Stat. 4265 (1992).

<sup>3</sup>The SBIR and STTR programs each include three phases. In phase I, agencies make awards to small businesses of up to \$150,000 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 project for an additional period. Phase III is for small businesses to pursue commercialization of technology developed in prior phases.

<sup>4</sup>15 U.S.C. § 638(j)(2), (p)(2)(B)(ix).

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STTR program.<sup>5</sup> Since the SBIR and STTR programs began, federal agencies have awarded at least 162,000 contracts and grants totaling around \$46 billion to small businesses to help them develop and commercialize new technologies. According to the Small Business Administration (SBA), which oversees the SBIR and STTR programs, 11 federal agencies participated in the SBIR program in fiscal year 2016 and obligated around \$2.4 billion for SBIR awards, and five agencies also participated in the STTR program in fiscal year 2016 and obligated around \$314 million for STTR awards, the most recent year for which data are available.

Within these 11 agencies, a number of component agencies provide SBIR or STTR awards.<sup>6</sup> For example, within the Department of Defense, the Air Force and Navy provide SBIR and STTR awards, as do nine other component agencies within the department. In addition, the Army has separate program offices for its SBIR and STTR awards.<sup>7</sup> Similarly, the Department of Commerce has two component agencies that provide SBIR and STTR awards—the National Institute of Standards and Technology and the National Oceanic and Atmospheric Administration. Table 1 lists the 28 component agencies we reviewed.

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<sup>5</sup>15 U.S.C. § 638(f)(1), (n)(1)(A). Agencies' R&D programs generally include funding for two types of R&D: intramural and extramural. Intramural R&D is conducted by employees of a federal agency in or through government-owned, government-operated facilities. Extramural R&D is generally conducted by nonfederal employees outside of federal facilities.

<sup>6</sup>We use the term component agencies in this report to refer to the 28 departments, agencies, or components that we reviewed.

<sup>7</sup>Because the two Army offices review applications and issue awards independently, we treat the two as separate component agencies in this report.

**Table 1: Twenty-Eight Component Agencies in GAO’s Review of Small Business Award Programs**

<p><b>Department of Commerce</b></p> <ol style="list-style-type: none"> <li>1. National Institute of Standards and Technology</li> <li>2. National Oceanic and Atmospheric Administration</li> </ol> <p><b>Department of Defense</b></p> <ol style="list-style-type: none"> <li>3. Department of the Air Force</li> <li>4. Department of the Army, SBIR<sup>a</sup></li> <li>5. Department of the Army, STTR<sup>a</sup></li> <li>6. Department of the, Navy</li> <li>7. Defense Advanced Research Projects Agency</li> <li>8. Defense Health Agency</li> <li>9. Defense Logistics Agency</li> <li>10. Defense Microelectronics Activity</li> <li>11. Defense Threat Reduction Agency</li> <li>12. Joint Science and Technology Office for Chemical and Biological Defense</li> <li>13. Missile Defense Agency</li> <li>14. National Geospatial-Intelligence Agency</li> <li>15. Special Operations Command</li> </ol>	<p><b>Department of Energy</b></p> <ol style="list-style-type: none"> <li>16. Advanced Research Projects Agency-Energy</li> <li>17. Office of Science</li> </ol> <p><b>Department of Health and Human Services</b></p> <ol style="list-style-type: none"> <li>18. Centers for Disease Control and Prevention</li> <li>19. Food and Drug Administration</li> <li>20. National Institutes of Health</li> </ol> <p><b>Department of Homeland Security</b></p> <ol style="list-style-type: none"> <li>21. S&amp;T Directorate</li> <li>22. Domestic Nuclear Detection Office</li> </ol> <p><b>23. Department of Education</b></p> <p><b>24. Department of Transportation</b></p> <p><b>25. Environmental Protection Agency</b></p> <p><b>26. National Aeronautics and Space Administration</b></p> <p><b>27. National Science Foundation</b></p> <p><b>28. U.S. Department of Agriculture</b></p>
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Source: GAO review of agency documents and interviews with agency officials. | GAO-19-620

Note: Programs include the Small Business Innovation Research (SBIR) program and Small Business Technology Transfer (STTR) program.

<sup>a</sup>The Army oversees SBIR and STTR awards through two program offices, which we describe separately in this report.

SBA provides policy directives on the general operation of the SBIR and STTR programs.<sup>8</sup> According to the SBA policy directive for SBIR and STTR, at least once a year, each participating agency issues a solicitation requesting proposals on a variety of topics. Each agency reviews the proposals it receives to determine which small businesses should receive awards, then negotiates contracts, grants, or cooperative agreements to issue the awards to the selected small businesses. The Small Business Act and SBA directive state that most agencies are required to review proposals and to notify applicants of the agency’s decision no more than

<sup>8</sup>Small Business Act §§ 9(j), (p), codified at 15 U.S.C. § 638(j), (p); Small Business Administration, SBIR/STTR Policy Directive (May 2, 2019).

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90 calendar days after the closing date of the solicitation.<sup>9</sup> Further, the directive recommends that most agencies issue awards—that is, finalize the funding agreement with the selected small businesses—no more than 180 calendar days after the closing date of the solicitation.<sup>10</sup> According to an SBA official, these time periods apply to both the initial phase I award and the follow-on phase II awards.

The John S. McCain National Defense Authorization Act for Fiscal Year 2019 included provisions requiring the Department of Defense to institute a pilot program to reduce the award issuance time for SBIR and STTR programs.<sup>11</sup> The Act also included provisions for GAO to report annually for 4 years on the timeliness of agencies' SBIR and STTR proposal review and award issuance, and to identify best practices for shortening proposal review and award times, among other things.<sup>12</sup> This report—the first of the annual reports required by the act—covers fiscal years 2016 through 2018 and describes: (1) the amount of time agencies spent reviewing SBIR and STTR proposals and notifying awardees, and the factors that affect the time spent; and (2) the amount of time agencies spent issuing SBIR and STTR awards, and the factors that affect the time spent.

To describe the time agencies spent reviewing proposals and issuing awards, we collected information on awards made by 28 component agencies from fiscal years 2016 through 2018, the 3 most recent years for

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<sup>9</sup>15 U.S.C. § 638(g)(4), (o)(4); SBIR/STTR Policy Directive § 7(c)(1)(i) (May 2, 2019). The act and directive require the National Institutes of Health and National Science Foundation to notify applicants no more than 1 year after the closing date of the solicitation.

<sup>10</sup>The directive recommends that the National Institutes of Health and National Science Foundation issue awards no more than 15 months after the closing date of the solicitation. SBIR/STTR Policy Directive § 7(c)(1)(i) (May 2, 2019). The SBIR/STTR Policy Directive defines funding agreement as any contract, grant, or cooperative agreement entered into between any Federal Agency and any small business concern for the performance of experimental, developmental, or research work, including products or services, funded in whole or in part by the Federal Government. SBIR/STTR Policy Directive § 3(r) (May 2, 2019).

<sup>11</sup>John S. McCain National Defense Authorization Act for Fiscal Year 2019, Pub. L. 115-232 § 854(b)(1)(C) (Aug. 13, 2018). The Act calls for a pilot program to reduce the time for awards under the SBIR and STTR programs of the Department of Defense to be as close to 90 days as possible.

<sup>12</sup>John S. McCain National Defense Authorization Act for Fiscal Year 2019, Pub. L. 115-232 § 854(b)(2)(B) (Aug. 13, 2018). The Act also calls for the reporting on best practices for shortening proposal review and award times by no later than December 5, 2021.



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which data were available.<sup>13</sup> For every award issued in these years, we asked each component agency to report certain dates, including the proposal submission date, the solicitation close date, the date the awardee was notified that they were selected for an award, the date the award was issued, and the award's period of performance—the period of time during which the awardee is expected to complete the award activities.<sup>14</sup> We calculated the time spent reviewing a proposal and notifying the awardee starting from the solicitation close date and ending at the notification of the awardee. We calculated the time spent issuing an award starting from the solicitation close date and ending at either the award issuance date or the first day of the period of performance if the issuance date was not available.<sup>15</sup>

We took several steps to assess the reliability of the data provided. First, we evaluated the data for potential outliers by looking for awards with particularly long or short notification or issuance periods. We also looked for potential duplicates by identifying awards with identical award numbers. We then asked the component agencies to review the data on these specific awards and make any necessary corrections, which we then included in our data. In addition, we compared our data for fiscal year 2016 awards to information in SBA's fiscal year 2016 annual report to Congress on the SBIR and STTR programs, the most recent report

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<sup>13</sup>We included all component agencies that provide SBIR or STTR awards except for the Administration for Community Living within the Department of Health and Human Services because its 41 awards in fiscal years 2016 through 2018 were not included in the department-wide solicitation and award process led by the National Institutes of Health. At each component agency, we collected data on phase I and phase II awards, and we report results of these awards together. We did not find a statistically significant difference in notification time between phase I and II awards. Some analyses show that phase II awards—which are typically for significantly more money and are often ineligible for expedited acquisition—take longer to issue. We excluded phase III awards because they are funded by sources other than the SBIR and STTR programs.

<sup>14</sup>The act and policy directive state that agencies are to notify all applicants of the results of the agency's proposal review. Because we collected data on awards for this report, we did not examine the time agencies used to notify applicants whose proposals were not recommended for award. We requested the following dates for each award: the date the agency received the awardee's proposal; the date the solicitation closed for the awardee's proposal; the date the agency notified the awardee that their proposal was recommended for award; the date the agency and company agreed to a final award document; the first day of the period during which the award activities were expected to occur; and the last day of the period during which the award activities were expected to occur.

<sup>15</sup>If the proposal did not respond to a solicitation—for example, a phase II proposal submitted at the completion of a prior phase I award—we used the proposal submission date in lieu of the solicitation close date.

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available.<sup>16</sup> To verify the accuracy of the data provided, we also compared the dates reported by each of the component agencies to dates in grant or contract documents, emails, and other relevant agency documentation—for between two and six awards per component agency—and assessed any discrepancies. After updating the data as needed based on these steps, we used the resulting data set of 15,453 awards to calculate the proposal review and notification time and award issuance time for each award.<sup>17</sup> As part of our data collection, we also asked each component agency about the processes they used to record the data and to provide it to us. We found the data to be sufficiently reliable for the purpose of describing the time spent reviewing proposals and issuing awards at each component agency.

We performed additional analysis to corroborate our proposal review and notification time and award issuance time results and found that they were robust when controlling for selected characteristics. We created regression models of notification and issuance times and, using these models, we estimated how awards' timeliness varied across five factors: the dollar value of each award, whether each award was phase I or phase II, the award's fiscal year, whether each award was through the SBIR or STTR program, and each award's type of grant or contract. Further, we used the model to estimate how mean notification or issuance times (reported below) changed with interagency differences in these factors. The models' timeliness predictions for a theoretical award with government-wide-average characteristics were generally quite similar to the actual mean at the agency. For example, for agencies with a mean issuance time that was longer than recommended, the model almost always predicted that the agency would also take longer than the recommended period to handle an award with government-wide-average

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<sup>16</sup>SBA is required to submit an annual report to Congress on the SBIR and STTR programs. 15 U.S.C. § 638(b)(7). We looked for differences in the total number of awards reported, the average time spent reviewing proposals and notifying awardees, and the average time to issue an award between our data and similar information reported by SBA and sought explanations for any discrepancies.

<sup>17</sup>From the agency-provided data, we removed all contracts from the Department of Health and Human Services (278 in total) because the department could not locate the date the awardee was notified that they were selected. We also removed 48 entries from across all 28 component agencies that had data problems, such as issuance dates prior to the proposal submission, that were not corrected during our review process. In addition, we removed approximately 1,000 duplicative entries, 1,500 entries for fiscal years outside the scope of our review, and 1,200 Department of Health and Human Services entries for grant actions other than competitive awards, such as administrative changes or non-competitive renewals.

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characteristics. These results suggest that factors in addition to the five that we modelled explain differences in review time.

To describe the factors that affect the time agencies spent reviewing proposals and issuing awards, we interviewed officials at 24 of the 28 component agencies and received written responses to our questions from two other offices.<sup>18</sup> These officials included the program manager of the SBIR or STTR program, and in some cases also included officials from the component agency's contracting or grants management offices. We also interviewed an official from SBA responsible for overseeing the SBIR and STTR programs. We reviewed their responses and summarized the factors they identified.<sup>19</sup> We did not evaluate the effect or relative importance of the factors on the amount of time spent reviewing proposals and issuing awards.

We conducted this performance audit from February 2019 to September 2019 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.

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## Timeliness of SBIR and STTR Proposal Review and Notification

Overall, component agencies reviewed proposals and notified awardees within the required time for 12,890 of the 15,453 SBIR and STTR awards that we reviewed (84 percent), for fiscal years 2016 through 2018. The Small Business Act and SBIR/STTR policy directive require most agencies notify applicants of the agency's decision within 90 calendar days and require NIH and NSF do so in 1 year.<sup>20</sup> Agencies notified

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<sup>18</sup>We accepted written responses to our question from the Defense Advanced Research Project Office and Defense Health Agency due to scheduling conflicts at the time of our interviews. We did not speak with officials from the Centers for Disease Control and Prevention (CDC) and Food and Drug Administration (FDA) because those agencies participate in the program led by the National Institutes of Health (NIH) and we spoke with officials from NIH. We report CDC and FDA separately from NIH because the authorizing legislation and policy directive describe different notification and issuance times for these agencies than for NIH.

<sup>19</sup>In this report we use the word "some" to describe factors that at least three agencies identified. However, because we did not discuss every factor with every agency we do not report nor compare the number of agencies that identified specific factors.

<sup>20</sup>15 U.S.C. § 638(g)(4), (o)(4); SBIR/STTR Policy Directive § 7(c)(1)(i) (May 2, 2019).

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awardees after the required time period for 2,533 of 15,453 awards (16 percent).<sup>21</sup> Three of the 28 component agencies met the notification requirement for every award in the data we reviewed, and nine additional component agencies did so for at least 90 percent of their awards. The remaining 16 component agencies met the notification requirement for less than 90 percent of their awards. Table 2 lists the mean and median notification times and the percentage of awardees notified within the required time period for each component agency.<sup>22</sup>

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<sup>21</sup> According to the policy directive, if the agency determines that it requires additional time between the solicitation closing date and the notification of recommendation for award, it must submit a written request for an extension to SBA. SBIR/STTR Policy Directive § 7(c)(1)(iv)(A) (May 2, 2019). The request should include information on the number of awards affected and reasons for the extension. Agencies may proceed with the awards with or without an extension. SBIR/STTR Policy Directive § 7(c)(1)(iv)(D) (May 2, 2019). We did not evaluate if agencies requested or obtained waivers for any of the 2,533 awards where notification occurred after the required time period. Data excludes 20 Environmental Protection Agency awards and 10 Defense Threat Reduction Agency awards in which the agencies did not report a notification date, but did have data on issuance time.

<sup>22</sup> The mean and median notification times provide measures of the time spent reviewing proposals and notifying awardees. The mean notification time represents the average amount of time spent across all awards. The median notification time represents the time at which half of the notifications were completed.

**Table 2: Number of Awards, Mean and Median Notification Times and Percent of Awardees Notified within the Required Period, by Department and Component Agency (Fiscal Years 2016-2018)**

Department or Agency Component Agency	Number of awards	Mean notification time (days)	Median notification time (days)	Percent of awardees notified within required period <sup>a</sup>
<b>Department of Commerce</b>	<b>182</b>	<b>79</b>	<b>85</b>	<b>99</b>
National Oceanic and Atmospheric Administration	121	82	85	100
National Institute of Standards and Technology	61	74	78	98
<b>Department of Defense</b>	<b>6224</b>	<b>78</b>	<b>76</b>	<b>74</b>
Department of the Navy	2197	76	70	79
Department of the Air Force	1755	85	83	60
Missile Defense Agency	435	89	89	94
Department of the Army, SBIR	423	78	82	78
Defense Advanced Research Projects Agency	391	61	56	94
Defense Health Agency	346	50	48	99
Department of the Army, STTR	181	89	91	24
Special Operations Command	159	46	37	96
Defense Logistics Agency	109	76	89	53
Defense Threat Reduction Agency	89	112	103	6
Joint Science and Technology Office for Chemical and Biological Defense	73	74	79	96
National Geospatial-Intelligence Agency	42	115	132	36
Defense Microelectronics Activity	24	288	279	0
<b>Department of Energy</b>	<b>1609</b>	<b>93</b>	<b>84</b>	<b>82</b>
Office of Science	1595	93	84	82
Advanced Research Projects Agency-Energy	14	80	78	79
<b>Department of Health and Human Services</b>	<b>3899</b>	<b>201</b>	<b>178</b>	<b>96</b>
National Institutes of Health	3840	201	177	98
Centers for Disease Control and Prevention	43	249	237	0
Food and Drug Administration	16	255	255	0
<b>Department of Homeland Security</b>	<b>117</b>	<b>61</b>	<b>56</b>	<b>100</b>
Science & Technology Directorate	91	58	56	100
Domestic Nuclear Detection Office	26	71	77	100
<b>Department of Education</b>	<b>53</b>	<b>87</b>	<b>86</b>	<b>83</b>
<b>Department of Transportation</b>	<b>71</b>	<b>76</b>	<b>79</b>	<b>72</b>
<b>Environmental Protection Agency</b>	<b>46</b>	<b>260</b>	<b>258</b>	<b>0</b>
<b>National Science Foundation</b>	<b>1260</b>	<b>194</b>	<b>193</b>	<b>99.8</b>

Department or Agency Component Agency	Number of awards	Mean notification time (days)	Median notification time (days)	Percent of awardees notified within required period <sup>a</sup>
<b>NASA</b>	1622	86	88	98
<b>U.S. Department of Agriculture</b>	340	138	147	0

Source: GAO analysis of Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) award data. | GAO-19-620

Note: Data excludes 20 Environmental Protection Agency awards and 10 Defense Threat Reduction Agency awards in which the agencies did not report a notification date, but did have data on issuance time.

<sup>a</sup>The National Science Foundation (NSF) and National Institutes of Health (NIH) must notify awardees within 1 year (365 days). All other participating agencies must issue a notice in no more than 90 calendar days. The Small Business Administration may grant waivers to agencies to notify applicants after the required period. We did not assess the extent to which agencies requested or received waivers in this report.

Some notifications occurred within days after the required time period, while others occurred months later. For example, all of the notifications by the Department of Education from fiscal year 2016 through 2018 that took longer than 90 days occurred in 91 days. Department officials attributed the one day difference to interpreting the 90-day requirement as a 3-month requirement. Similarly, all of the notifications for Army STTR awards that occurred after the 90-day requirement occurred within 92 days. Of the 2,533 awards with notifications after the required time, notifications occurred on average about 1 ½ months later.<sup>23</sup>

During the 3 fiscal years that we reviewed, some component agencies had substantial changes from year to year in the percentage of awardees that they notified within the required time period, while other component agencies consistently notified about the same percentage of awardees. For example, the Department of Energy’s Office of Science and the Army SBIR program each had a single fiscal year during which they notified less than 50 percent of awardees within the required time period, substantially less than during the other fiscal years we examined.<sup>24</sup> Table 3 describes the percent of awardees notified within the required time by each component agency for each of the 3 fiscal years we examined.

<sup>23</sup>The mean number of days after the required period was 46 days.

<sup>24</sup>According to the request by the Office of Science to the SBA for an extension, the longer proposal review and notification time in fiscal year 2017 was due to a new review process implemented by the new administration. Army SBIR notified 75 of 151 awardees in fiscal year 2017 in either 91 or 92 days, just over the 90-day requirement.

Appendix I provides additional information on the awards we reviewed for each component agency.

**Table 3: Percent of Awardees Notified within the Required Period per Fiscal Year (FY), by Department and Component Agency**

Department or Agency Component Agency	Percent of FY 2016 awardees notified within required period <sup>a</sup>	Percent of FY 2017 awardees notified within required period	Percent of FY 2018 awardees notified within required period
<b>Department of Commerce</b>	<b>100</b>	<b>98</b>	<b>100</b>
National Oceanic and Atmospheric Administration	100	100	100
National Institute of Standards and Technology	100	95	100
<b>Department of Defense</b>	<b>83</b>	<b>70</b>	<b>69</b>
Department of the Navy	78	79	79
Department of the Air Force	92	40	49
Missile Defense Agency	94	94	95
Department of the Army, SBIR	99	49	87
Defense Advanced Research Projects Agency	86	99	94
Defense Health Agency	98	99	100
Department of the Army, STTR	38	26	11
Special Operations Command	88	95	100
Defense Logistics Agency	35	55	58
Defense Threat Reduction Agency	0	11	8
Joint Science and Technology Office for Chemical and Biological Defense	94	97	96
National Geospatial-Intelligence Agency	n/ <sup>ab</sup>	100	0
Defense Microelectronics Activity	0	0	0
<b>Department of Energy</b>	<b>99.6</b>	<b>49</b>	<b>96</b>
Office of Science	99.6	49	97
Advanced Research Projects Agency-Energy	100	100	57
<b>Department of Health and Human Services</b>	<b>96</b>	<b>97</b>	<b>96</b>
National Institutes of Health	97	98	98
Centers for Disease Control and Prevention	0	0	0
Food and Drug Administration	0	0	0
<b>Department of Homeland Security</b>	<b>100</b>	<b>100</b>	<b>100</b>
Science & Technology Directorate	100	100	100
Domestic Nuclear Detection Office	100	100	100
<b>Department of Education</b>	<b>36</b>	<b>100</b>	<b>100</b>
<b>Department of Transportation</b>	<b>89</b>	<b>90</b>	<b>38</b>
<b>Environmental Protection Agency</b>	<b>0</b>	<b>0</b>	<b>0</b>

Department or Agency Component Agency	Percent of FY 2016 awardees notified within required period <sup>a</sup>	Percent of FY 2017 awardees notified within required period	Percent of FY 2018 awardees notified within required period
National Science Foundation	99.8	100	99.8
NASA	99	100	96
U.S. Department of Agriculture	0	0	0

Source: GAO analysis of Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) award data. | GAO-19-620

<sup>a</sup>The National Science Foundation (NSF) and National Institutes of Health (NIH) must notify awardees within 1 year (365 days). All other participating agencies must issue a notice in no more than 90 calendar days. Small Business Administration may grant waivers to agencies to notify applicants after the required period. We did not assess the extent to which agencies requested or received waivers in this report.

<sup>b</sup>The National Geospatial-Intelligence Agency made no phase I or phase II SBIR or STTR awards in fiscal year 2016.

Agency officials described several factors that affect the time spent reviewing proposals and notifying awardees, including (1) the availability of reviewers, (2) the number of proposals to review, and (3) other agency-specific factors.<sup>25</sup>

**Availability of reviewers.** Officials from some component agencies we interviewed said the availability of agency staff or external reviewers affected the time they spent reviewing proposals. For example, USDA officials told us that the agency cannot notify awardees within 90 days because they need additional time to identify and recruit experts for their external peer review system. USDA officials compared their review process to that of the NSF and NIH, the two agencies that are directed to complete proposal review and notification within 1 year. Similarly, Navy officials said that the availability of reviewers was the biggest variable in completing their proposal review and notification process. These reviewers are Navy employees who contribute part of their time to reviewing SBIR and STTR proposals while continuing to perform their regular duties. According to Navy officials, although they give reviewers deadlines based on the number of proposals they have to review, conflicts with their regular duties or higher priority tasks may cause reviewers to miss their deadlines. In contrast, Department of Education officials said that they identify and train reviewers before the agency receives proposals so that the reviews may begin as soon as possible.

<sup>25</sup>We did not assess the extent to which these factors had an effect on the time needed to review proposals and notify awardees.



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Other agencies, however, may not know what areas of expertise reviewers will need until the agency has examined the proposals it received.

**Number of proposals.** Officials from some component agencies we interviewed said the number of proposals they receive affected the time spent reviewing proposals and notifying awardees. For example, officials from the Department of Transportation said that the number of proposals they receive can range between two and 40, which makes it difficult to predict the workload of agency evaluators who perform the proposal reviews. Similarly, National Institute of Standards and Technology officials said that the number of proposals they receive fluctuates from year to year. Because agencies must review all proposals that meet the minimum requirements, an increase in the number of proposals directly increases the workload of proposal reviewers.

**Other agency-specific factors.** Some component agency officials identified factors specific to their agency or process as factors affecting the time needed. For example:

- Two component agencies within the Department of Health and Human Services—the Centers for Disease Control and Prevention (CDC) and Food and Drug Administration (FDA)—notified none of their awardees within the required time in fiscal years 2016 through 2018. CDC and FDA participate in the solicitation and review process led by the NIH. However, while the NIH has 1 year to notify awardees, these agencies are required to notify awardees within 90 calendar days. CDC officials said that participating in the longer NIH program is more efficient than creating their own review process and allows them to leverage additional programs at NIH that support small business awardees.
- Environmental Protection Agency officials told us that their review process includes three consecutive reviews, which leads the agency to regularly request waivers to exceed the 90-day notification requirement. These reviews include an administrative review for responsiveness to the solicitation, an external peer review process, and an internal review by the SBIR program office.
- Some agency officials also identified continuing resolutions, sequestration, or government shutdowns as factors that could slow proposal review. Proposal review and notification activities could be affected because the availability or amount of funds for agency

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activities is uncertain in these instances.<sup>26</sup> For example, a Defense Microelectronics Activity official told us that their agency generally completes its proposal review process within 90 days, but does not notify awardees until it has determined funding availability for awards later in the fiscal year.

- National Institute of Standards and Technology officials described a delay notifying one awardee, a replacement awardee, due to the initial awardee being determined ineligible during a pre-award assessment. The agency made a replacement selection immediately, but this replacement awardee was notified approximately 20 days after the 90-day requirement.

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## Timeliness of SBIR and STTR Award Issuance

Overall, component agencies issued 11,710 of the 15,453 awards we reviewed (76 percent) within the recommended time period, for fiscal years 2016 through 2018. The SBIR/STTR policy directive recommends that most agencies issue an award within 180 days and recommends that NIH and NSF do so in 15 months.<sup>27</sup> Agencies issued 3,743 of the 15,453 awards (24 percent) after the recommended time period. Three of 28 component agencies issued every award in the data we reviewed within the recommended time, and five additional component agencies did so for at least 90 percent of their awards. The remaining 20 component agencies issued less than 90 percent of their awards within the recommended time period. For the 3,743 awards that agencies issued after the recommended time period, the average award was issued about two and a half months after the recommended time.<sup>28</sup> Table 4 lists the mean and median award issuance times and the percent of awards issued within the recommended time for each component agency.

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<sup>26</sup>A continuing resolution is an appropriation act that provides budget authority for federal agencies, specific activities, or both to continue in operation when Congress and the President have not completed action on the regular appropriation acts by the beginning of the fiscal year. A continuing resolution may be enacted for the full year, up to a specified date, or until regular appropriations are enacted. A continuing resolution usually specifies a maximum rate at which the obligations may be incurred based on levels specified in the resolution. For example, the resolution may state that obligations may not exceed the current rate or must be the lower of the amounts provided in the appropriation bills passed in the House or Senate. Sequestration is the cancellation of budgetary resources provided by discretionary appropriations or direct spending laws.

<sup>27</sup>SBIR/STTR Policy Directive § 7(c)(1)(i) (May 2, 2019).

<sup>28</sup>The mean number of days after the recommended period was 76 days.

**Table 4: Number of Awards, Mean and Median Award Issuance Times and Percent Awarded within the Recommended Period, by Department/Agency and Component Agency (Fiscal Years 2016-2018)**

Department or Agency Component Agency	Number of awards	Mean award issuance time (days)	Median award issuance time (days)	Percent awarded within recommended period <sup>a</sup>
<b>Department of Commerce</b>	<b>182</b>	<b>124</b>	<b>131</b>	<b>100</b>
National Oceanic and Atmospheric Administration	121	138	137	100
National Institute of Standards and Technology	61	96	103	100
<b>Department of Defense</b>	<b>6234</b>	<b>188</b>	<b>174</b>	<b>56</b>
Department of the Navy	2197	169	141	69
Department of the Air Force	1755	187	176	54
Missile Defense Agency	435	206	180	62
Department of the Army, SBIR	423	224	205	34
Defense Advanced Research Projects Agency	391	185	175	54
Defense Health Agency	346	211	201	30
Department of the Army, STTR	181	201	182	45
Special Operations Command	159	124	129	90
Defense Logistics Agency	109	196	189	46
Defense Threat Reduction Agency	99	326	292	0
Joint Science and Technology Office for Chemical and Biological Defense	73	236	224	34
National Geospatial-Intelligence Agency	42	160	183	50
Defense Microelectronics Activity	24	356	351	4
<b>Department of Energy</b>	<b>1609</b>	<b>150</b>	<b>134</b>	<b>80</b>
Office of Science	1595	149	134	81
Advanced Research Projects Agency-Energy	14	285	288	0
<b>Department of Health and Human Services</b>	<b>3899</b>	<b>264</b>	<b>240</b>	<b>94</b>
National Institutes of Health	3840	263	240	95
Centers for Disease Control and Prevention	43	312	268	23
Food and Drug Administration	16	295	255	31
<b>Department of Homeland Security</b>	<b>117</b>	<b>130</b>	<b>104</b>	<b>79</b>
Science & Technology Directorate	91	111	103	97
Domestic Nuclear Detection Office	26	194	195	19
<b>Department of Education</b>	<b>53</b>	<b>96</b>	<b>91</b>	<b>100</b>
<b>Department of Transportation</b>	<b>71</b>	<b>186</b>	<b>174</b>	<b>63</b>
<b>Environmental Protection Agency</b>	<b>66</b>	<b>279</b>	<b>288</b>	<b>8</b>
<b>National Science Foundation</b>	<b>1260</b>	<b>202</b>	<b>201</b>	<b>99.9</b>
<b>NASA</b>	<b>1622</b>	<b>138</b>	<b>137</b>	<b>97</b>

Department or Agency Component Agency	Number of awards	Mean award issuance time (days)	Median award issuance time (days)	Percent awarded within recommended period <sup>a</sup>
<b>U.S. Department of Agriculture</b>	340	264	281	10

Source: GAO analysis of Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) award data. | GAO-19-620

<sup>a</sup>The National Science Foundation (NSF) and National Institutes of Health (NIH) should issue awards within 15 months. All other agencies should issue an award in no more than 180 calendar days.

During the 3 fiscal years that we reviewed, some component agencies had substantial changes from year to year in the percentage of awards they issued within the recommended time period, while other component agencies consistently issued about the same percentage of awards within the recommended time period. For example, the Department of Energy’s Advanced Research Projects Agency-Energy issued no awards within the recommended time in each of the three years we examined.<sup>29</sup> Table 5 describes the percent of awards issued within the recommended time period by each component agency for each of the 3 fiscal years we examined.

**Table 5: Percent of Awards Issued within the Recommended Period per Fiscal Year, by Department and Component Agency**

Department or Agency Component Agency	Percent of FY 2016 awards issued within recommended period <sup>a</sup>	Percent of FY 2017 awards issued within recommended period	Percent of FY 2018 awards issued within recommended period
<b>Department of Commerce</b>	<b>100</b>	<b>100</b>	<b>100</b>
National Oceanic and Atmospheric Administration	100	100	100
National Institute of Standards and Technology	100	100	100
<b>Department of Defense</b>	<b>62</b>	<b>50</b>	<b>58</b>
Department of the Navy	76	61	71
Department of the Air Force	66	42	54
Missile Defense Agency	56	58	69
Department of the Army, SBIR	43	29	30

<sup>29</sup>According to Advanced Research Projects Agency-Energy, phase I awards at the agency include options for subsequent phase II awards and this increases the time to initial award for awardees, but effectively eliminates the lag time between phases.

<b>Department or Agency</b> Component Agency	<b>Percent of FY 2016 awards issued within recommended period<sup>a</sup></b>	<b>Percent of FY 2017 awards issued within recommended period</b>	<b>Percent of FY 2018 awards issued within recommended period</b>
Defense Advanced Research Projects Agency	72	50	25
Defense Health Agency	10	17	61
Department of the Army, STTR	25	40	66
Special Operations Command	88	94	85
Defense Logistics Agency	80	59	28
Defense Threat Reduction Agency	0	0	0
Joint Science and Technology Office for Chemical and Biological Defense	76	36	0
National Geospatial-Intelligence Agency	n/a <sup>b</sup>	100	22
Defense Microelectronics Activity	0	0	11
<b>Department of Energy</b>	<b>97</b>	<b>50</b>	<b>92</b>
Office of Science	98	50	93
Advanced Research Projects Agency-Energy	0	0	0
<b>Department of Health and Human Services</b>	<b>92</b>	<b>95</b>	<b>95</b>
National Institutes of Health	93	96	96
Centers for Disease Control and Prevention	14	9	39
Food and Drug Administration	14	33	50
<b>Department of Homeland Security</b>	<b>86</b>	<b>76</b>	<b>74</b>
Science & Technology Directorate	100	100	89
Domestic Nuclear Detection Office	42	0	0
<b>Department of Education</b>	<b>100</b>	<b>100</b>	<b>100</b>
<b>Department of Transportation</b>	<b>39</b>	<b>55</b>	<b>92</b>
<b>Environmental Protection Agency</b>	<b>0</b>	<b>0</b>	<b>23</b>
<b>National Science Foundation</b>	<b>99.8</b>	<b>100</b>	<b>100</b>
<b>NASA</b>	<b>99</b>	<b>99</b>	<b>94</b>
<b>U.S. Department of Agriculture</b>	<b>0</b>	<b>0</b>	<b>30</b>

Source: GAO analysis of Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) award data. | GAO-19-620

<sup>a</sup>The National Science Foundation (NSF) and National Institutes of Health (NIH) should issue awards within 15 months. All other agencies should issue an award in no more than 180 calendar days.

<sup>b</sup>The National Geospatial-Intelligence Agency made no phase I or phase II SBIR or STTR awards in fiscal year 2016.

Agency officials described several factors that increased the time spent issuing awards, including (1) additional time needed to issue certain types of contracts, (2) the availability of grants and contracting officers, (3)

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delays coordinating among agency officials, (4) the responsiveness of awardees, and (5) the availability of funding for the awards.<sup>30</sup>

**Cost reimbursement contracts.** Officials from some component agencies we interviewed said that the contract type was a factor that affected the time needed to issue SBIR and STTR awards.<sup>31</sup> Specifically, officials said cost reimbursement contracts took longer to issue because of the need to review the awardee's accounting system in accordance with federal acquisition regulations.<sup>32</sup> For example, officials from the Defense Advanced Research Projects Agency (DARPA) said cost reimbursement contracts routinely take more time to award than fixed-price contracts because of this accounting system review. According to DARPA officials, this review can add 45 days or more to the awards process. In February 2019, we found that the Department of Defense does not have a mechanism to monitor and ensure that contractor business system reviews and audits are conducted in a timely manner and recommended that the department develop such a mechanism.<sup>33</sup>

Our analysis of the SBIR and STTR award data confirmed that component agencies spent more time issuing awards identified as cost reimbursement contracts than issuing fixed price contracts. We found that SBIR and STTR awards identified as cost reimbursement contracts in the fiscal year 2016 through 2018 data took significantly longer to issue than

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<sup>30</sup>Except where noted below, we did not assess the extent to which these factors had an effect on the time needed to issue SBIR or STTR awards.

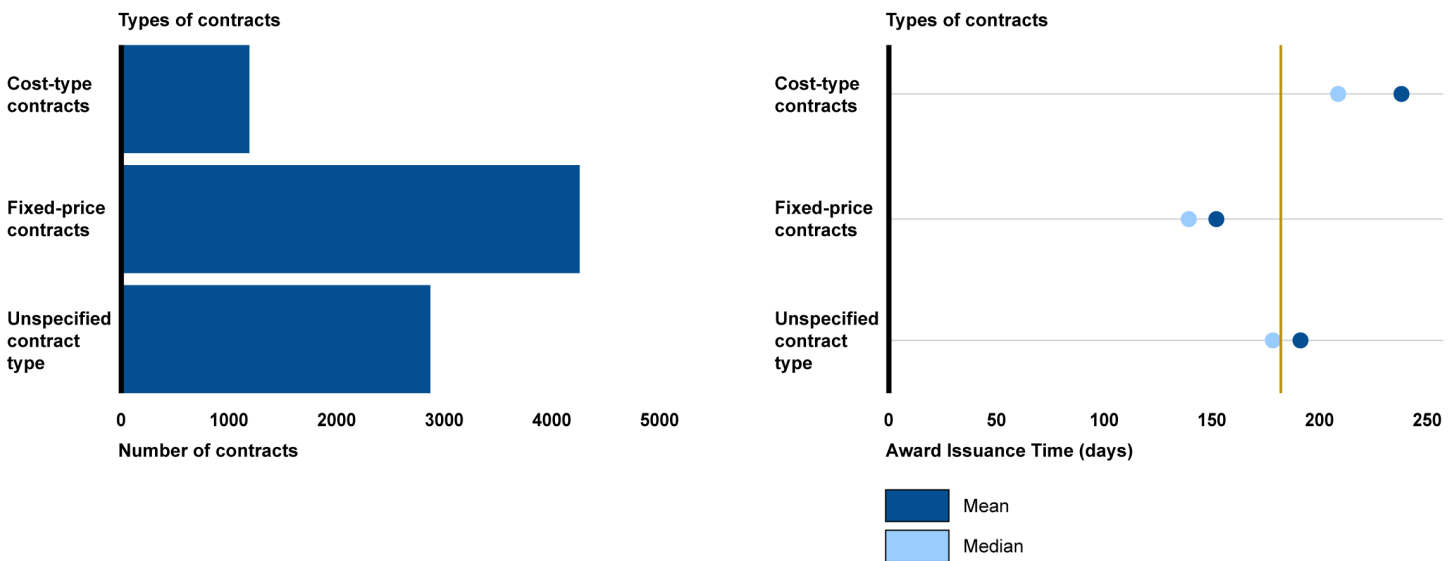
<sup>31</sup>According to the Federal Acquisition Regulation (FAR), a wide selection of contract types is available to the government and contractors to allow flexibility in acquiring a variety of products and services. FAR § 16.101(a). Contract types are grouped into two broad categories: fixed-price or cost-reimbursement contracts. For firm fixed-price contracts, the contractor has full responsibility for the costs of performance and the resulting profit or loss; whereas in cost-type contracts the government bears responsibility for the allowable costs of the contractor. FAR § 16.101(b).

<sup>32</sup>Federal acquisition regulations require certain contractors who do business with the government to maintain acceptable business systems that reduce risk to the government and taxpayer. For example, FAR § 16.301-3(a)(3) provides that a cost-reimbursement contract may be used only when, among other things, the contractor's accounting system is adequate for determining costs applicable to the contract or order. The Defense Federal Acquisition Regulation Supplement provides further regulations with respect to Department of Defense acquisitions. For defense agencies, the Defense Contract Audit Agency and Defense Contract Management Agency are generally responsible for reviewing contractor accounting systems.

<sup>33</sup>GAO, *Contractor Business Systems: DOD Needs Better Information to Monitor and Assess Review Process*, GAO-19-212 (Washington, D.C.: Feb. 7, 2019). Certain Department of Defense business system reviews are inapplicable to small business.

those identified as fixed-price, as shown in figure 1. Fixed-price contracts took on average 152 days and cost reimbursement contracts took 231 days (79 days longer). Cost reimbursement contracts also took on average 40 days longer than contracts that were not specified as fixed or cost reimbursement.<sup>34</sup>

**Figure 1: Number and Issuance Time for Fixed Price and Cost Reimbursement Contracts**



Source: GAO analysis of agency SBIR and STTR contracts from fiscal years 2016 through 2018. | GAO-19-620

**Availability of grants or contracting officers.** The availability or experience of agency staff to negotiate the contract or grant can be a factor, according to some component agency officials. First, some officials said limited availability of grants or contracting officers was a factor in the time to issue awards and may result in delays. For example, officials from both Army program offices said that the workload for contracting officers is high, and SBIR and STTR awards are part of a larger contracting backlog. Similarly, officials from the National Institute of Standards and Technology and National Oceanic and Atmospheric Administration also

<sup>34</sup>The difference remained statistically significant when we controlled for differences among component agencies, award amounts, fiscal year, phase, and whether a proposal was in the SBIR or STTR program. Point estimates of the extra time required to issue a cost-type contract ranged between 59.9 and 79.2 days depending on which variables we controlled for and whether we considered only agencies that issued both kinds of contracts.

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said that the availability of grants and contracting officers is a pervasive issue for federal agencies that can affect award timeliness. Second, officials from some component agencies said that the contracting officer's level of experience with small business awards affects the time needed to issue SBIR and STTR awards.

**Coordination among agency officials.** Air Force officials said that the need for coordination among agency officials, such as between the contracting officer and proposal evaluators, can create delays. Because the proposal review and award process can require coordination among multiple officials who are not always immediately available, delays may occur as one official waits for input or information from another. Beginning in fiscal year 2018, the Air Force made changes to its proposal review and award process for a subset of awards that included scheduling dedicated time for reviewers, contracting officers, and other agency officials to jointly evaluate proposals and process awards. This change guaranteed the availability of agency officials and reduced the time needed for coordination among these officials. Overall, it allowed the agency to issue awards within a few days or weeks. According to agency officials, the Air Force awarded about 150 awards in 2018 through this process and they expect about one-third of Air Force awards in fiscal year 2019 and half of awards in fiscal year 2020 will use this expedited process.<sup>35</sup>

**Responsiveness of awardees.** Some component agency officials said that the responsiveness of the small business was a factor in delays. For example, officials from USDA said that the majority of SBIR grantees at USDA are first-time grantees who have never worked with the federal government, and this can extend the time it takes to issue the award. In order to receive an SBIR or STTR award, the small business must, among other things, submit a certification that it meets size, ownership, and other requirements.<sup>36</sup> Delays in providing these certifications or other information required by the awarding agency can therefore delay award issuance. In our July 2018 report that reviewed DOD's weapon-systems-related contracts awarded from fiscal year 2014 through fiscal year 2016, contracting officials stated that quicker contractor responses to requests

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<sup>35</sup>The Air Force issued an average of 585 contracts per year in fiscal years 2016 through 2018.

<sup>36</sup>SBIR/STTR Policy Directive App. I (e)(2)(b)(ii) (May 2, 2019).



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for additional information could help reduce the time between when a solicitation is issued to when a contract is awarded.<sup>37</sup>

**Availability of funding.** Some component agency officials said that delays in determining the amount of funding available for small business awards due to continuing resolutions or delays in intradepartmental fund transfers may delay the issuance of awards. For example, NASA officials said that they estimate the agency's R&D budget at the start of the fiscal year to calculate the amount required for SBIR and STTR awards. According to these officials, if NASA is operating under a continuing resolution at the start of the fiscal year, the estimate may be smaller than the final appropriated amounts. In this case, NASA would go back to its proposals to make additional awards from the pool of proposals that were rejected under the original estimate, and this would lead to longer issuance times for some awards.

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## Agency Comments and Our Evaluation

We provided a draft of this report to SBA and the 11 agencies that participated in the SBIR and STTR programs in fiscal years 2016 through 2018 for their review and comment. The SBA, Department of Defense, and Department of Education provided written comments that are reproduced in Appendix II, III, and IV. In addition, the Department of Energy, the NIH within the Department of Health and Human Services, Department of Transportation, and the National Institute of Standards and Technology within the Department of Commerce provided technical comments, which we incorporated as appropriate. The remaining agencies told us they had no comment. In its formal comments, the Department of Education stated that it has taken steps to ensure that future awardees will be notified within the required period.

In their comments, SBA and the Department of Defense suggested phase I and II awards should be evaluated separately in future reports. In this report, we combined phase I and II awards because we did not find a statistically significant difference in notification time between phase I and II awards in the fiscal year 2016 through 2018 data that we examined. However, some analyses showed that phase II awards took longer to

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<sup>37</sup>GAO, *Defense Contracts: DOD Should Develop a Strategy for Assessing Contract Award Time Frames*, [GAO-18-467](#) (Washington, D.C.: July 16, 2018).

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issue.<sup>38</sup> We may further examine differences between phase I and phase II awards in subsequent reports.

SBA also described the importance of minimizing delays between phase I and phase II awards. We did not evaluate the time between phase I and subsequent phase II awards in this report, but agree that the time between awards may be of interest in future reports because, as noted by SBA, the time between awards may affect small businesses' ability to retain key personnel. SBA also sought explanations for various dates and figures used in our analysis and we updated the report to include the definitions used when collecting award data and to describe our figures in more detail.

The Department of Defense also stated that the SBIR and STTR policy directive does not explicitly include phase II awards in its 90 and 180-day timeliness requirements. However, we confirmed with SBA—the agency that issues the directive—that the 90-day requirement for notification of selection and the 180-day recommendation for award issuance apply to both phase I and phase II awards.<sup>39</sup> The Department of Defense further stated that subsequent phase II awards could occur several years after the end of the initial phase II award and should not be included in the analysis of phase II awards. In this report, we took steps to eliminate these outliers from the data.<sup>40</sup>

We are sending copies of this report to the appropriate congressional committees, the Acting Administrator of the SBA, and other interested

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<sup>38</sup>We ran four linear regression models to assess time to issuance that included the award phase. The first three models used the full set of awards from fiscal year 2016 through 2018 and varied in the factors they considered, including fiscal year, amount of the award, contract type, and awarding agency. The award phase was a marginally significant factor in only one of these three models. The fourth model used data from only the seven components that provided data about whether each award was a cost-type or fixed-price contract and found that, the average Phase II grant for these seven components took an average of forty days longer.

<sup>39</sup>Except for the NIH and NSF which have one year to notify applicants and 15 months to issue and award.

<sup>40</sup>We calculated the notification and issuance times starting from the date the solicitation closed or the date of receipt of the proposal. Further, we evaluated the data for potential outliers by looking for awards with particularly long or short notification or issuance periods and sought agency review of these awards. Therefore, we expect that our analysis would calculate notification and issuance times based on the most recent solicitation or proposal date and not the date of the initial phase II award. However, long durations could occur if an award was made based on an earlier proposal that was not updated prior to award.

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parties. In addition, the report is available at no charge on the GAO website at <http://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (202) 512-6888 or [neumannj@gao.gov](mailto: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 III.



John Neumann  
Managing Director  
Science, Technology Assessment, and Analytics

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*List of Committees*

The Honorable James M. Inhofe  
Chairman  
The Honorable Jack Reed  
Ranking Member  
Committee on Armed Services  
United States Senate

The Honorable Marco Rubio  
Chairman  
The Honorable Ben Cardin  
Ranking Member  
Committee on Small Business and Entrepreneurship  
United States Senate

The Honorable Adam Smith  
Chairman  
The Honorable Mac Thornberry  
Ranking Member  
Committee on Armed Services  
House of Representatives

The Honorable Nydia Velázquez  
Chairwoman  
The Honorable Steve Chabot  
Ranking Member  
Committee on Small Business  
House of Representatives

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# Appendix I: Timeliness of Agencies' Small Business Awards

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This appendix describes the awards made by agencies participating in the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs, based on the data provided to GAO for fiscal years 2016 through 2018.

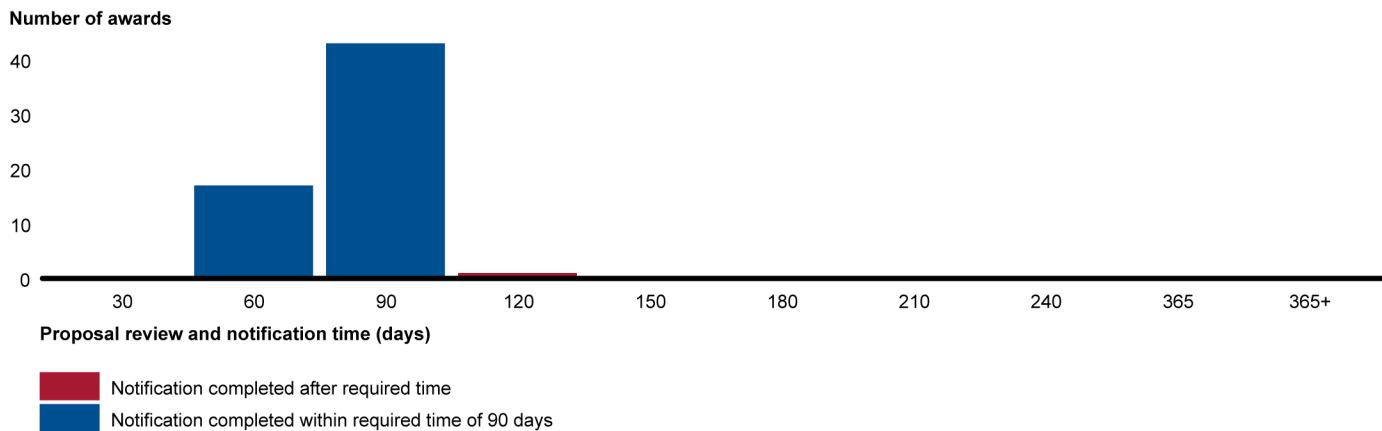
These data include figures showing the (1) proposal review and notification time, (2) award issuance time, and (3) distribution of awards by fiscal year and phase. The fiscal year and phase figure describes the number of phase I and phase II awards issued in fiscal years 2016 through 2018 and is based on the first year of the award activities. For example, if an agency obligated funding to a phase II award in fiscal years 2017 and 2018, the award is counted among the fiscal year 2017 phase II awards.



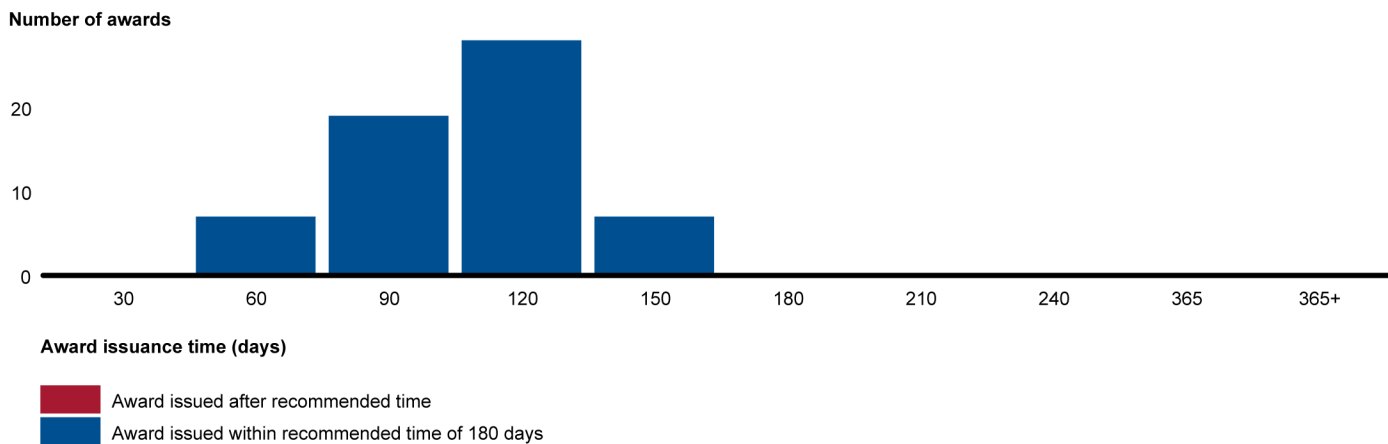
# NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

NIST participated in SBIR only.

## Small Business Award Timeliness (Fiscal Year 2016-2018 Awards)



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620

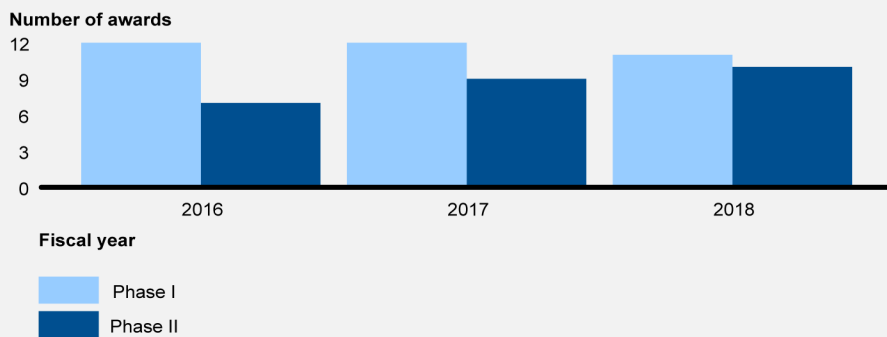
## Fiscal Year 2016-2018 Awards

**61**

Total number of awards issued by NIST

**\$11.2 million**

Total value (base and all options) of awards issued by NIST



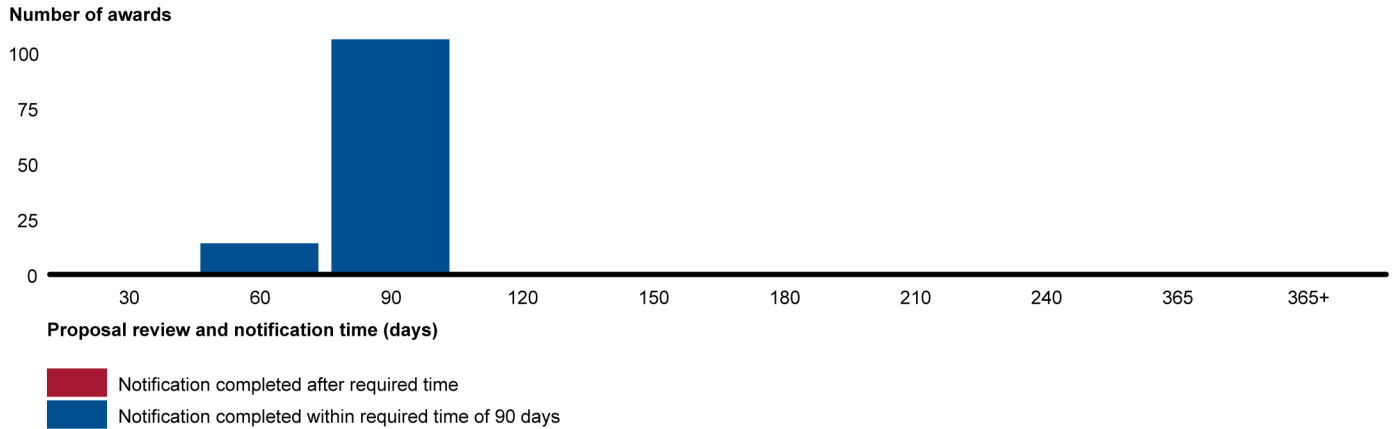
Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



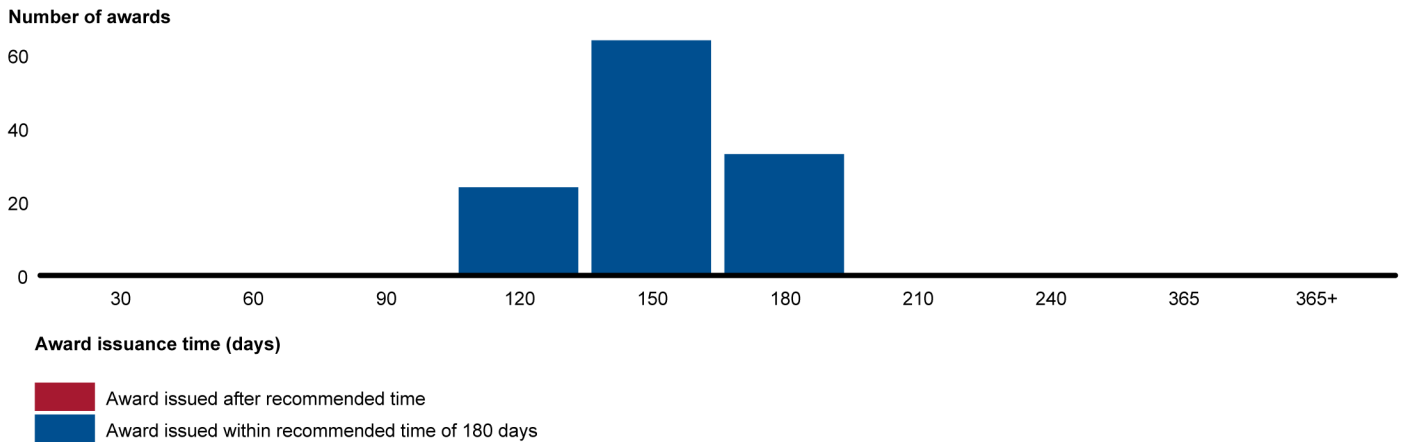
# NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

NOAA participated in SBIR only.

## Small Business Award Timeliness (Fiscal Year 2016-2018 Awards)



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620

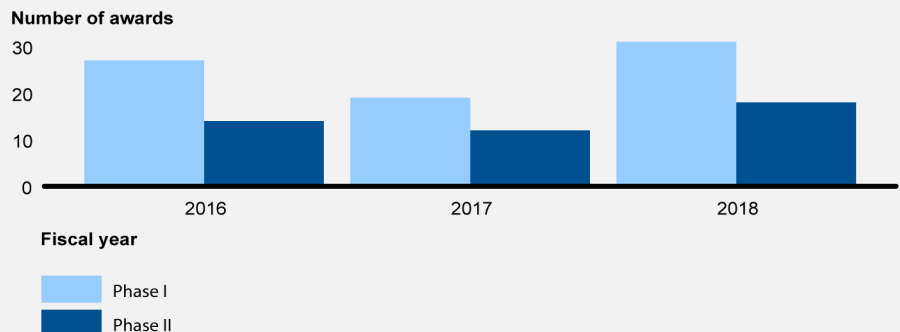
## Fiscal Year 2016-2018 Awards

**121**

Total number of awards issued by NOAA

**\$26.8 million**

Total value (base and all options) of awards issued by NOAA



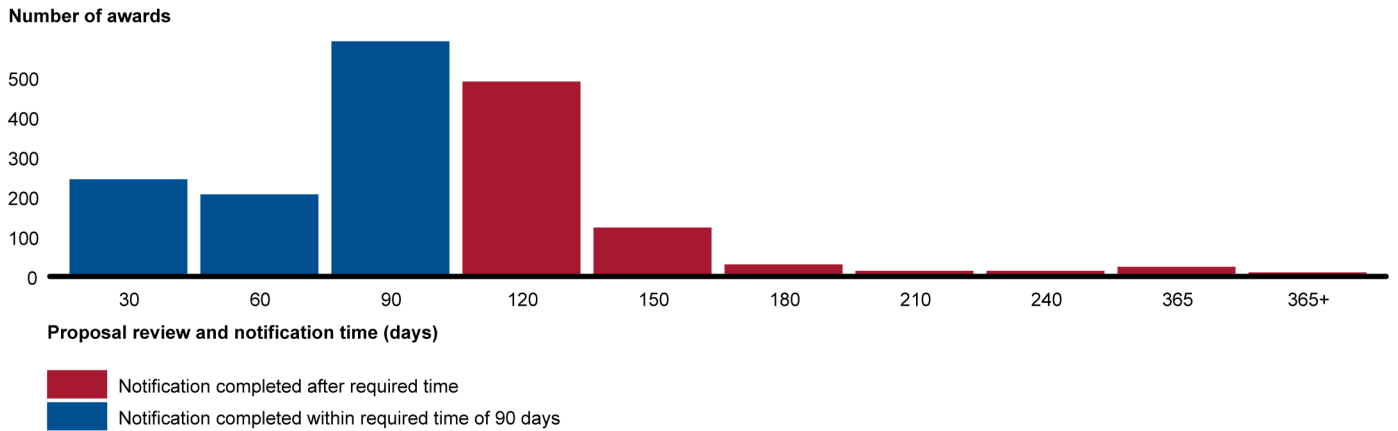
Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



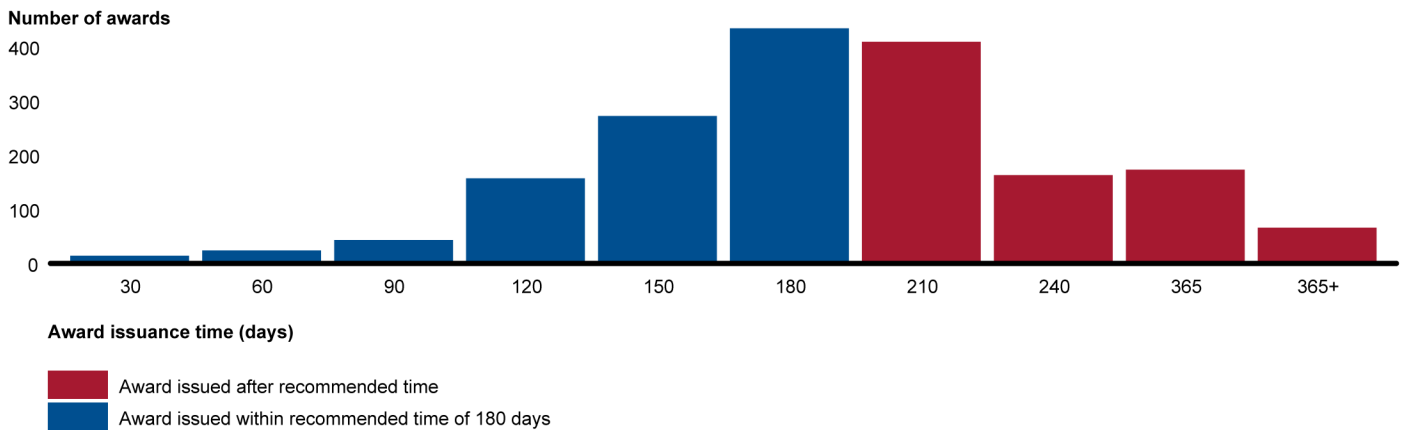
# DEPARTMENT OF THE AIR FORCE

Air Force participated in SBIR and STTR.

## Small Business Award Timeliness (Fiscal Year 2016-2018 Awards)



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620

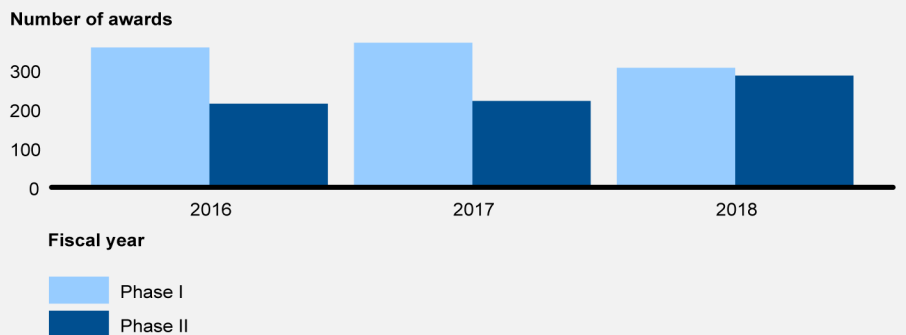
### Fiscal Year 2016-2018 Awards

**1755**

Total number of awards issued by Air Force

**\$792.9 million**

Total value (base and all options) of awards issued by Air Force



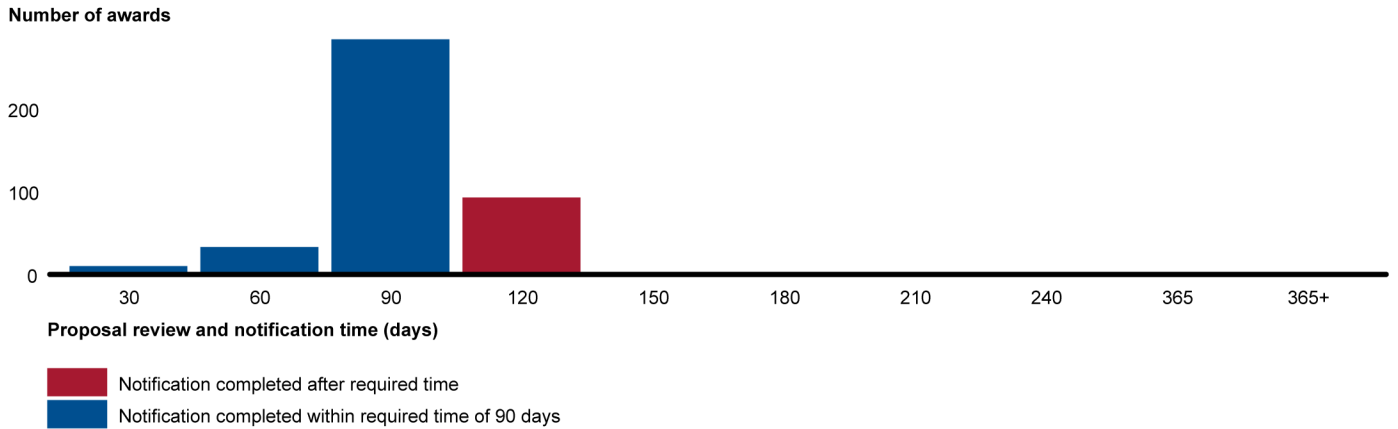
Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



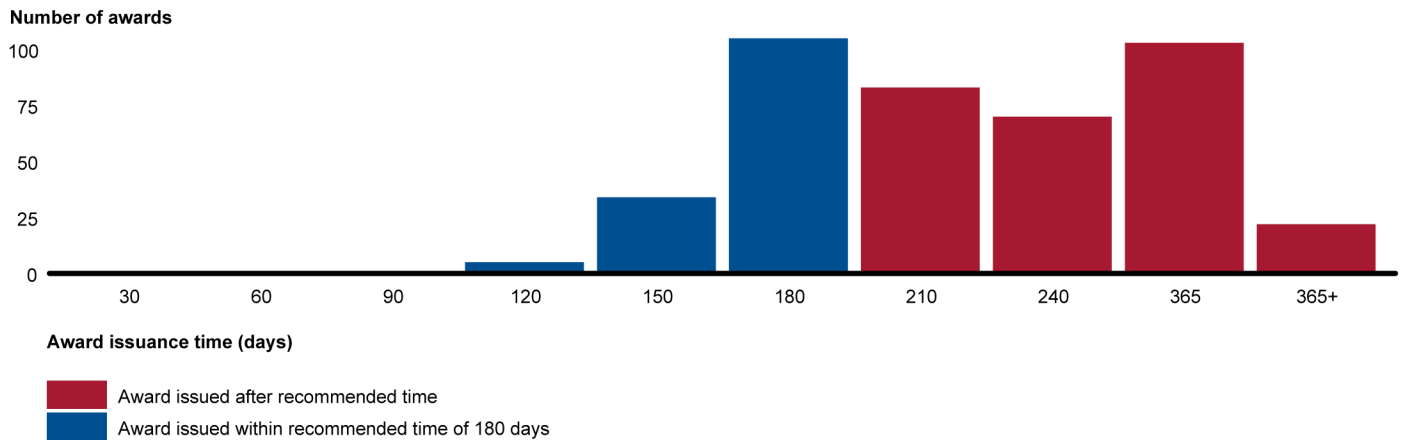


# DEPARTMENT OF THE ARMY, SBIR

## Small Business Award Timeliness (Fiscal Year 2016-2018 Awards)



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620

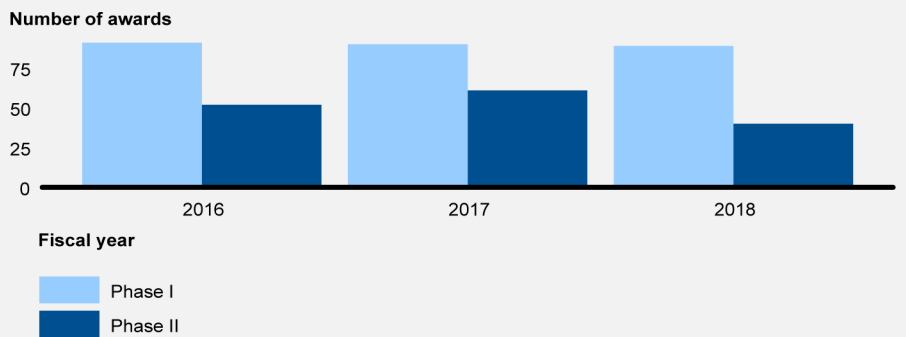
## Fiscal Year 2016-2018 Awards

**423**

Total number of SBIR awards issued by Army

**\$313.1 million**

Total value (base and all options) of SBIR awards issued by Army

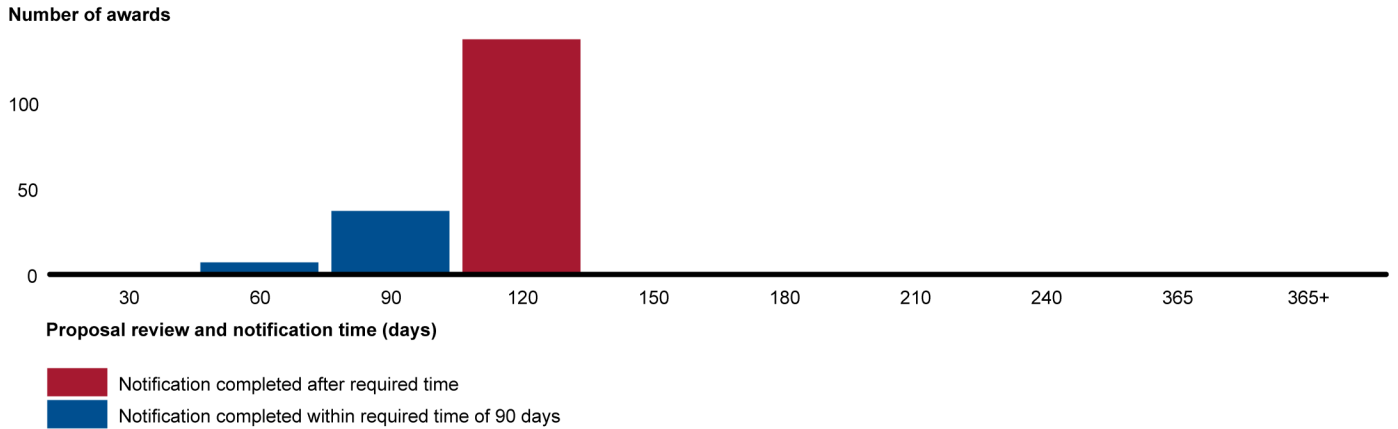


Source: GAO analysis of SBIR and STTR award data. | GAO-19-620

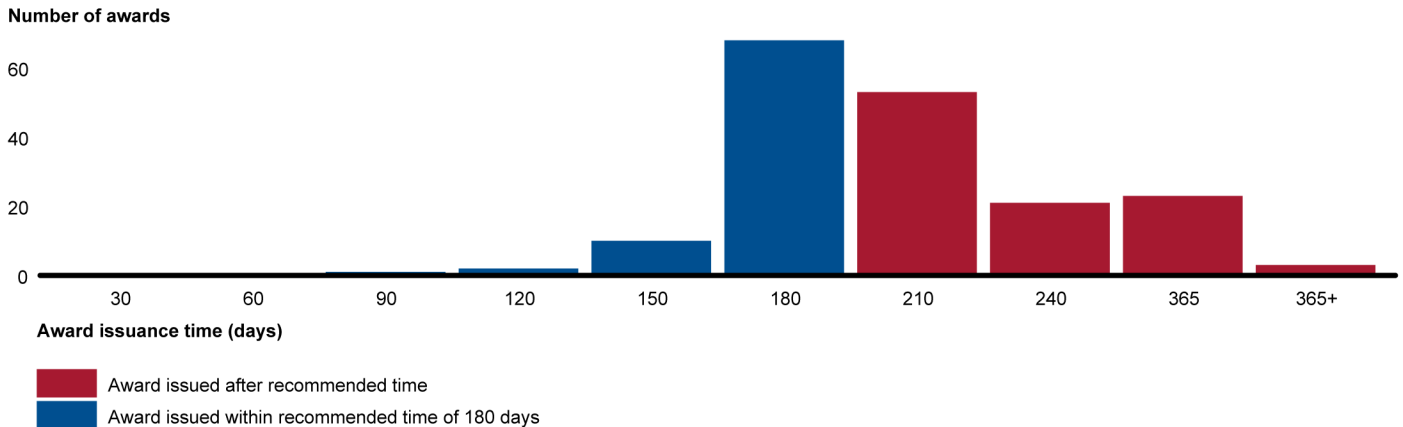


# DEPARTMENT OF THE ARMY, STTR

## Small Business Award Timeliness (Fiscal Year 2016-2018 Awards)



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620

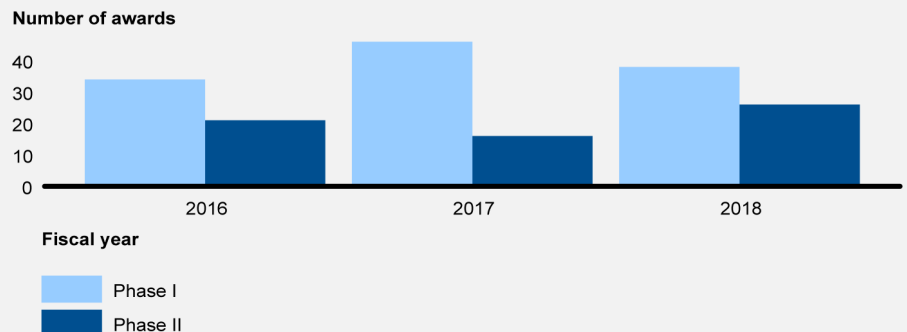
## Fiscal Year 2016-2018 Awards

**181**

Total number of STTR awards issued by Army

**\$65.0 million**

Total value (base and all options) of STTR awards issued by Army



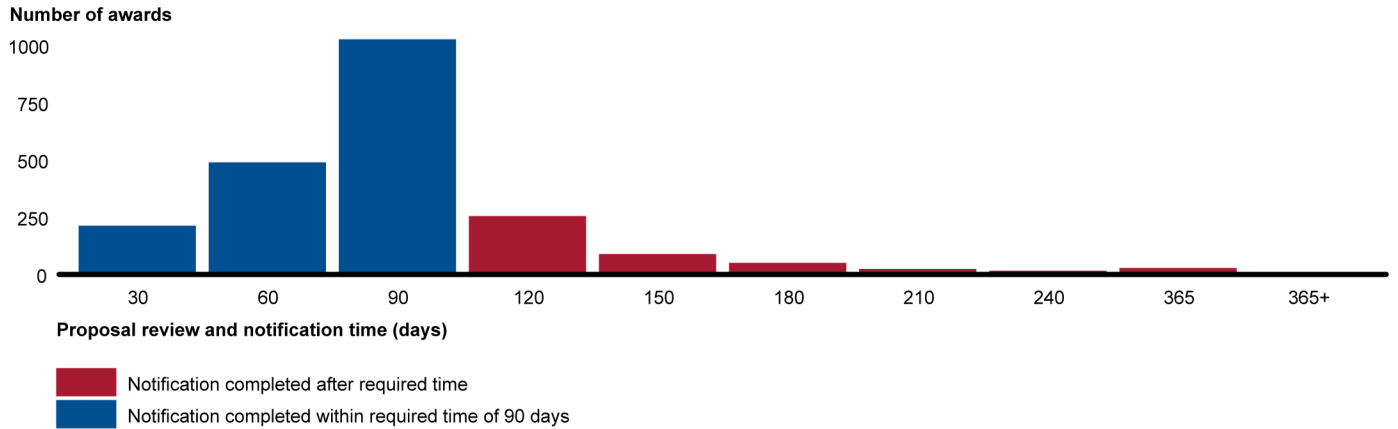
Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



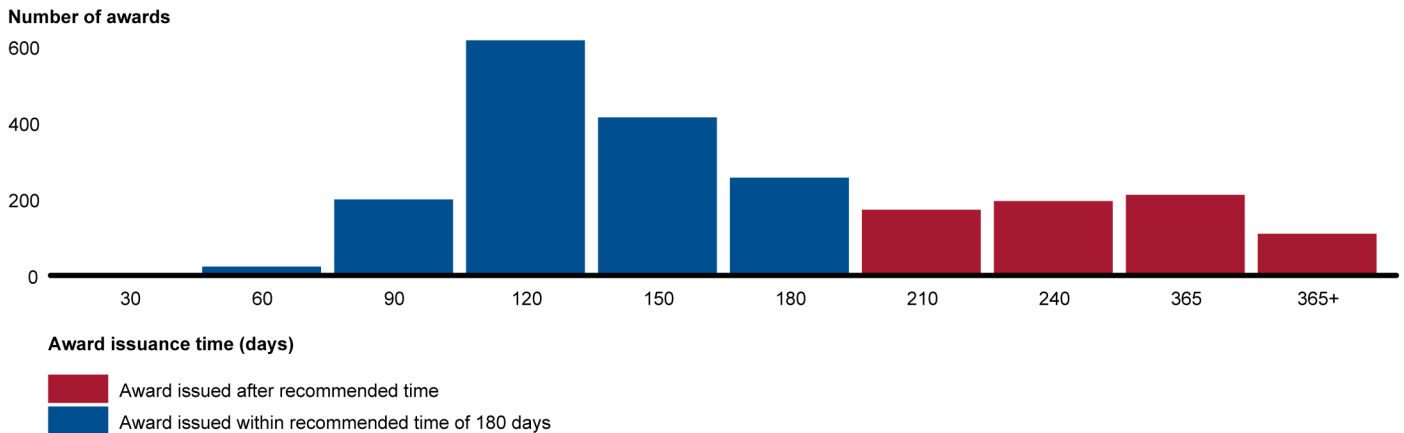
# DEPARTMENT OF THE NAVY

Navy participated in SBIR and STTR.

## Small Business Award Timeliness (Fiscal Year 2016-2018 Awards)



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620

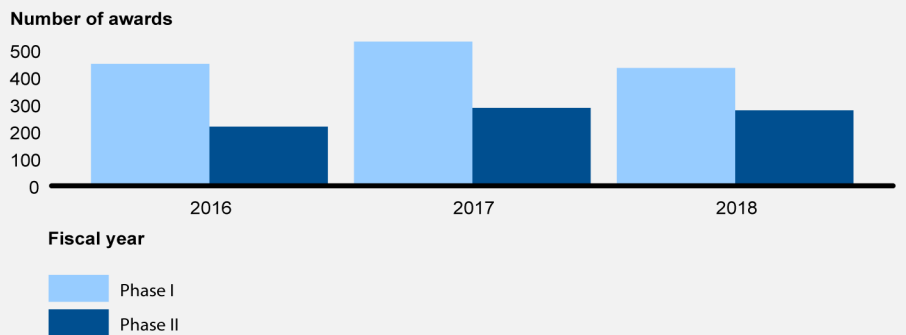
### Fiscal Year 2016-2018 Awards

**2197**

Total number of awards issued by Navy

**\$999.7 million**

Total value (base and all options) of awards issued by Navy



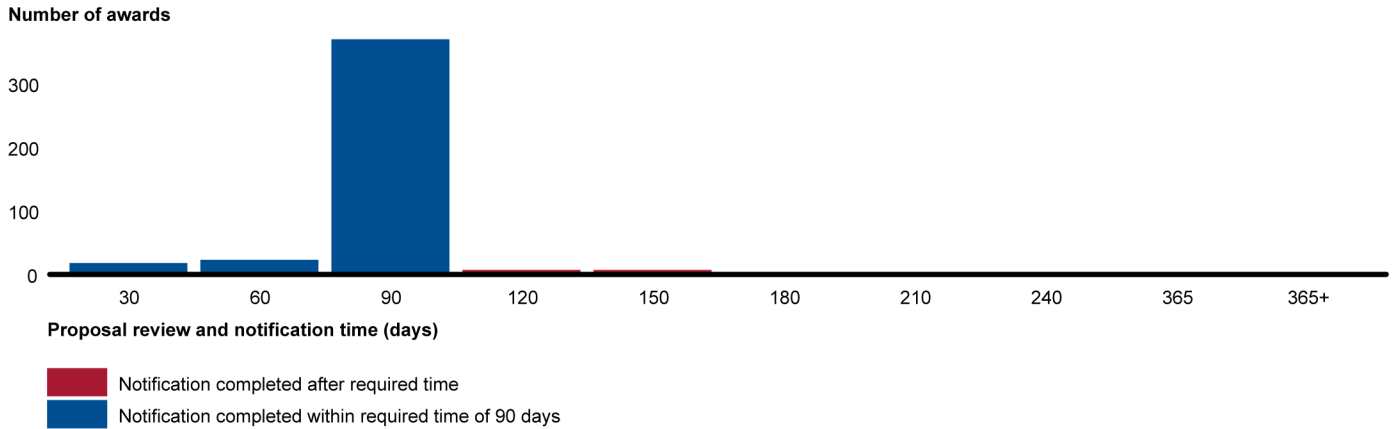
Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



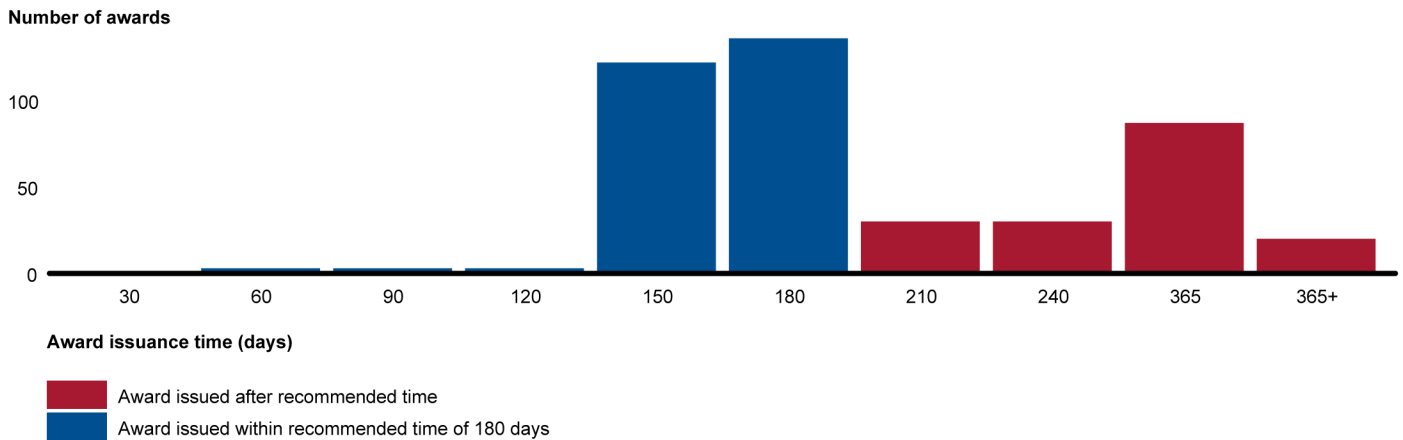
# MISSILE DEFENSE AGENCY

MDA participated in SBIR and STTR.

## Small Business Award Timeliness (Fiscal Year 2016-2018 Awards)



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620

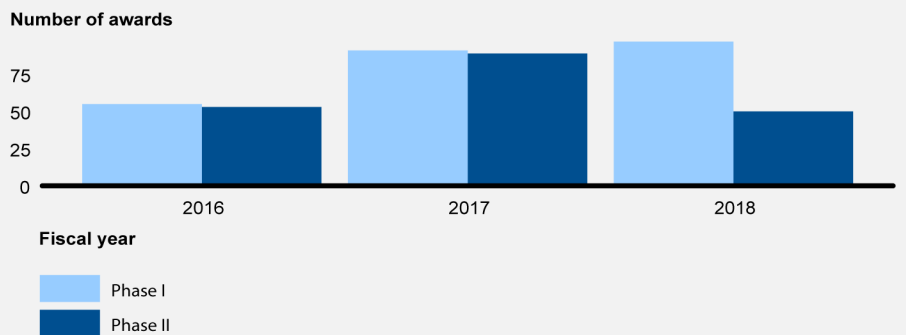
## Fiscal Year 2016-2018 Awards

# 435

Total number of awards issued by MDA

# \$237.3 million

Total value (base and all options) of awards issued by MDA



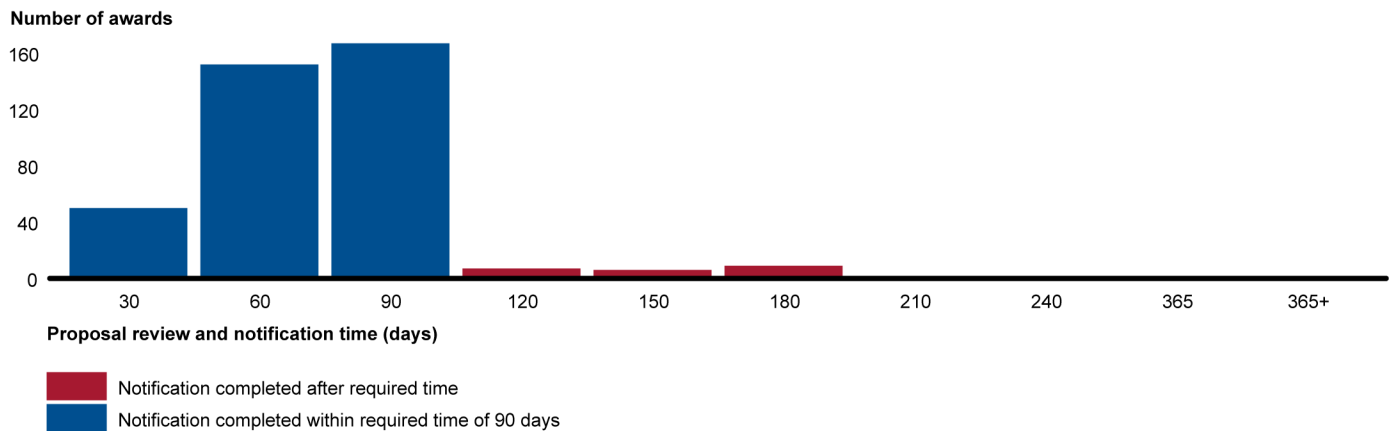
Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



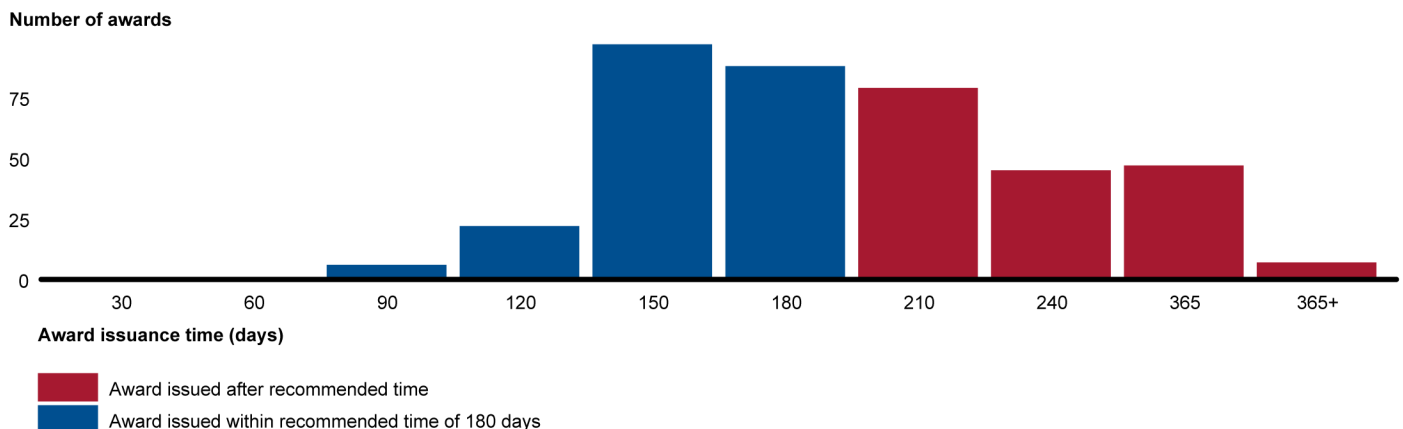
# DEFENSE ADVANCED RESEARCH PROJECTS AGENCY

DARPA participated in SBIR and STTR.

## Small Business Award Timeliness (Fiscal Year 2016-2018 Awards)



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620

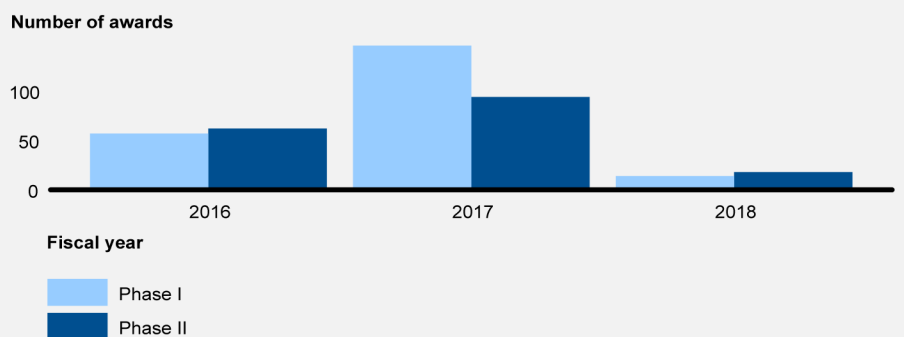
## Fiscal Year 2016-2018 Awards

# 391

Total number of awards issued by DARPA

# \$277.8 million

Total value (base and all options) of awards issued by DARPA



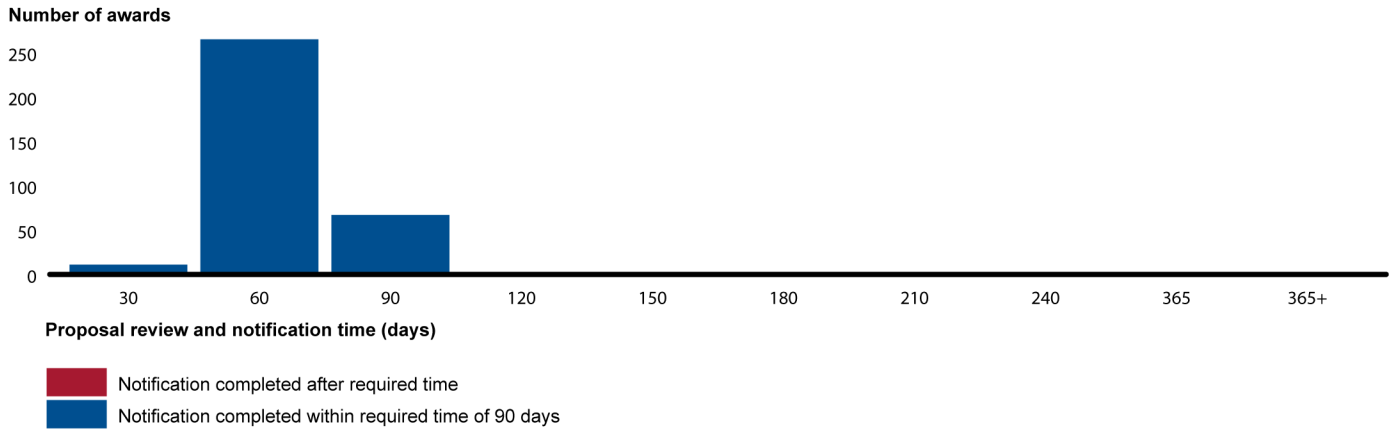
Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



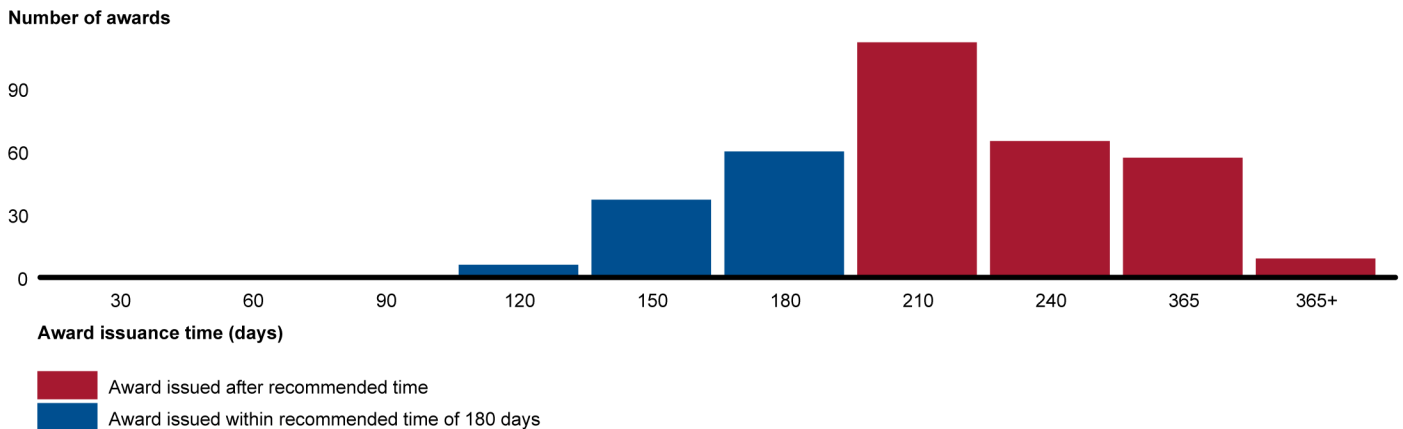
# DEFENSE HEALTH AGENCY

DHA participated in SBIR and STTR.

## Small Business Award Timeliness (Fiscal Year 2016-2018 Awards)



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620

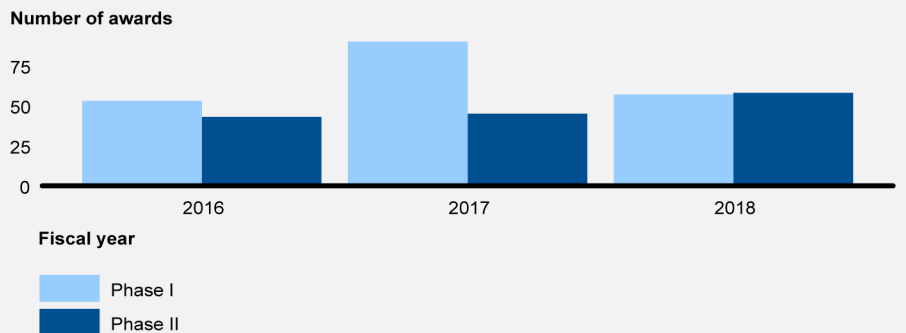
## Fiscal Year 2016-2018 Awards

**346**

Total number of awards issued by DHA

**\$175.4 million**

Total value (base and all options) of awards issued by DHA



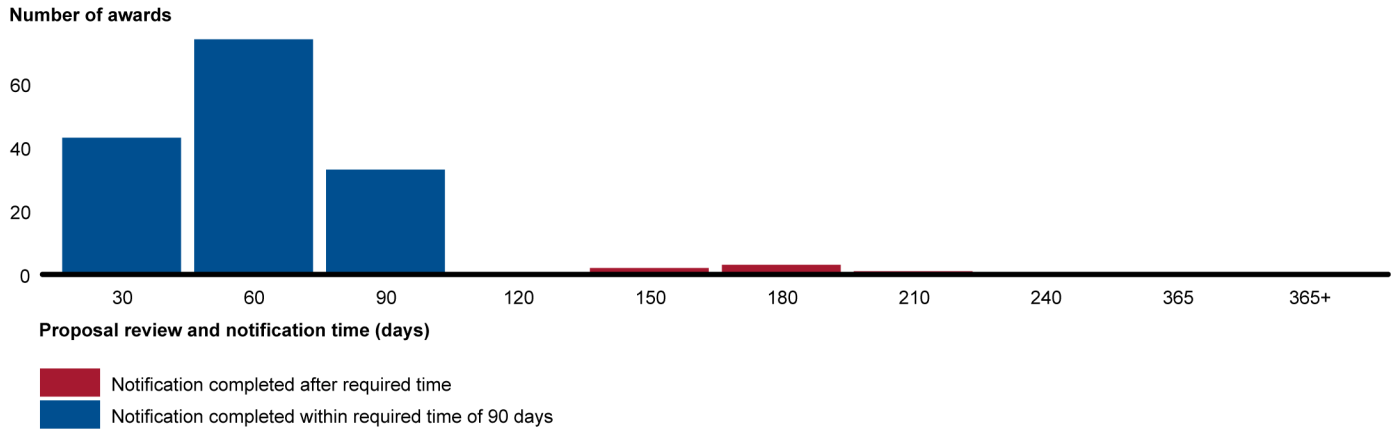
Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



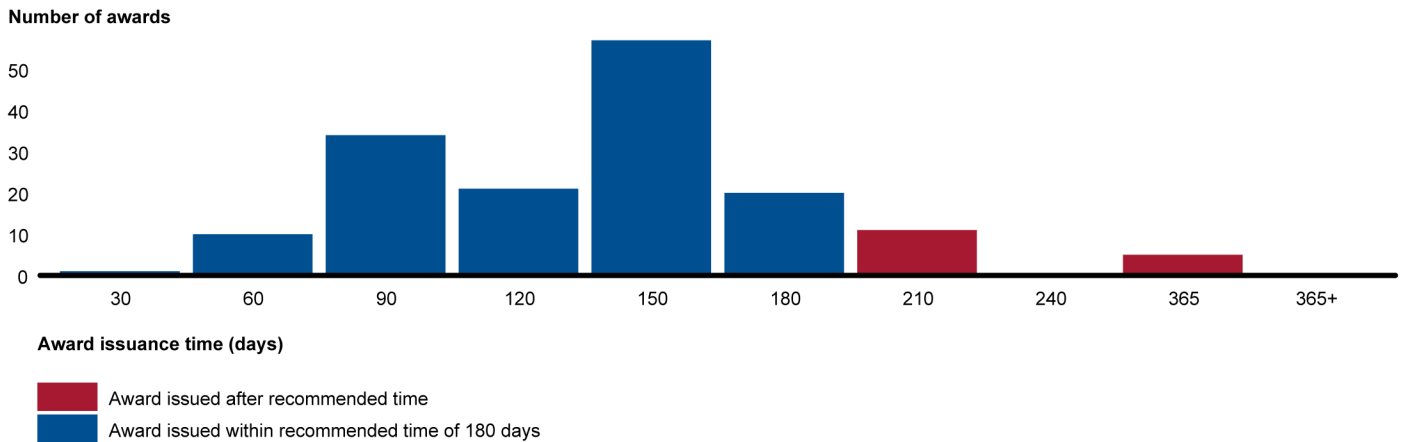
# SPECIAL OPERATIONS COMMAND

SOCOM participated in SBIR and STTR.

## Small Business Award Timeliness (Fiscal Year 2016-2018 Awards)



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620

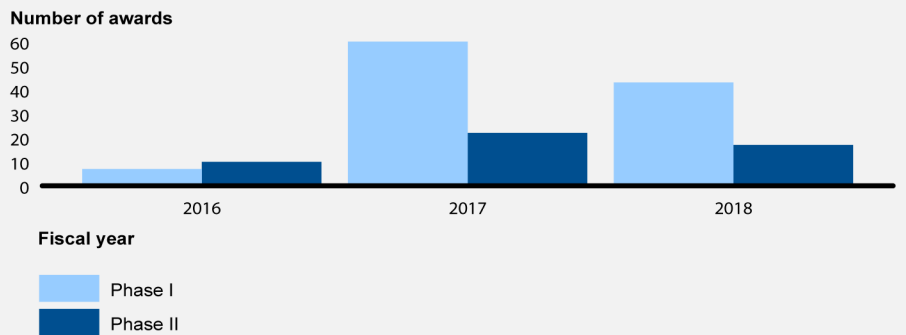
## Fiscal Year 2016-2018 Awards

**159**

Total number of awards issued by SOCOM

**\$75.3 million**

Total value (base and all options) of awards issued by SOCOM



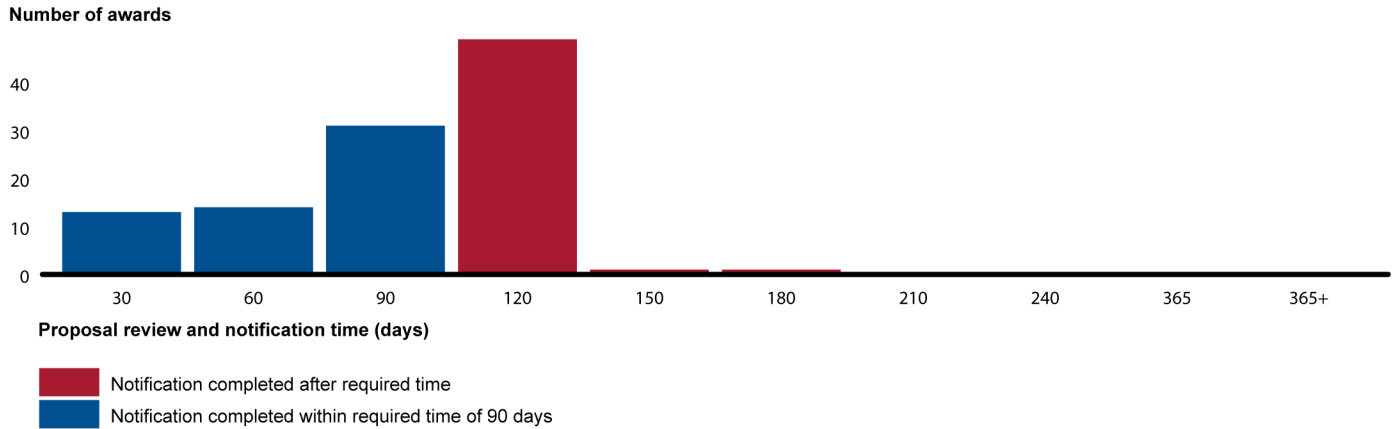
Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



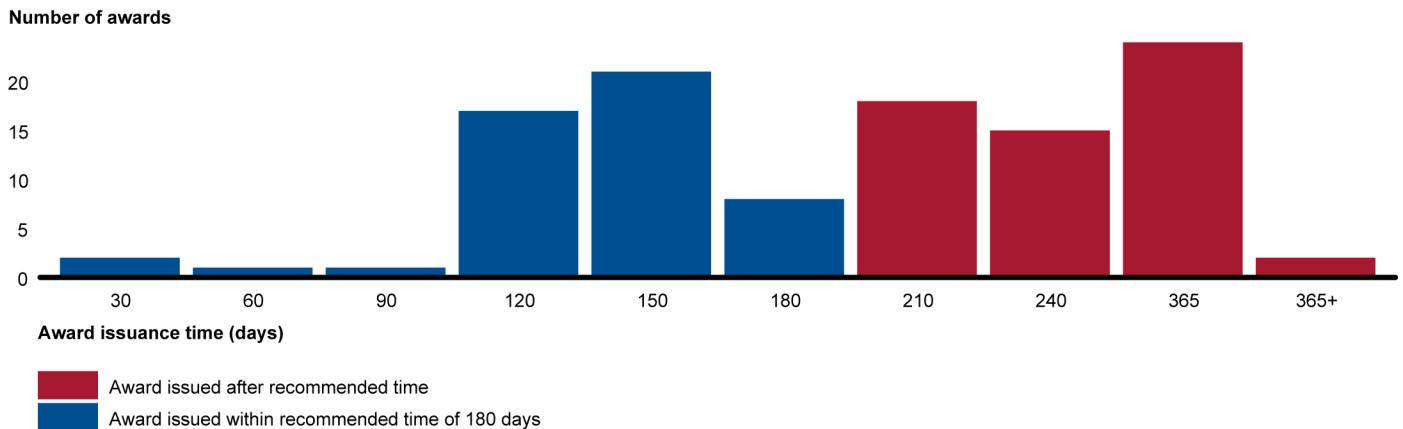
# DEFENSE LOGISTICS AGENCY

DLA participated in SBIR and STTR.

## Small Business Award Timeliness (Fiscal Year 2016-2018 Awards)



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620

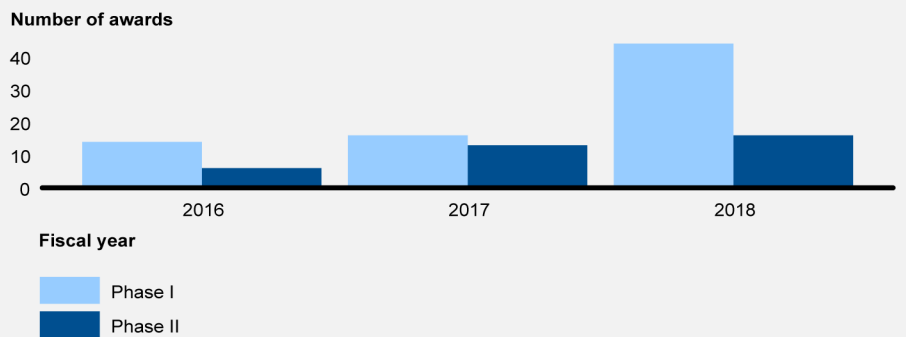
### Fiscal Year 2016-2018 Awards

**109**

Total number of awards issued by DLA

**\$41.2 million**

Total value (base and all options) of awards issued by DLA



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620

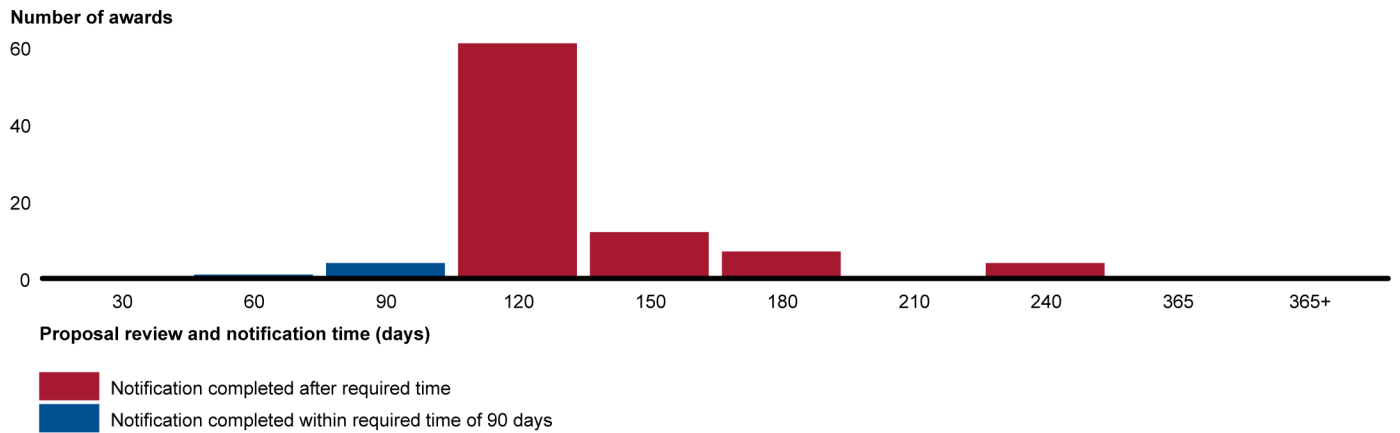




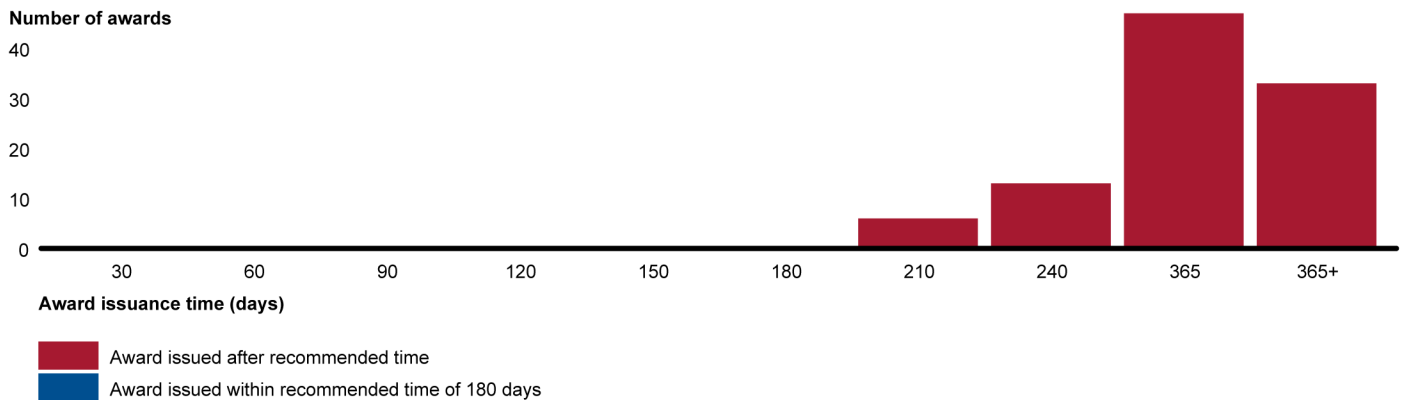
# DEFENSE THREAT REDUCTION AGENCY

DTRA participated in SBIR and STTR.

## Small Business Award Timeliness (Fiscal Year 2016-2018 Awards)



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620

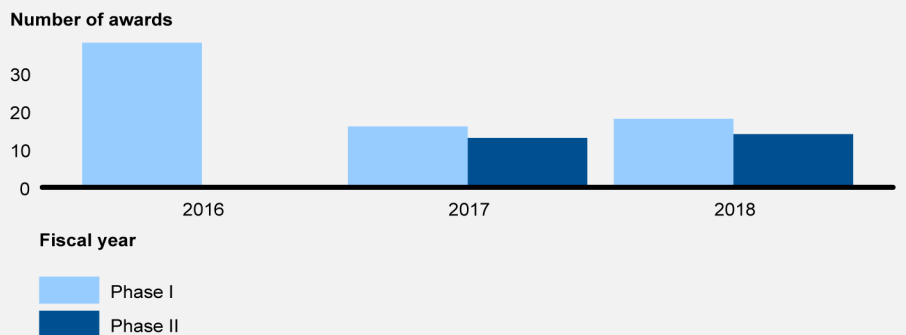
## Fiscal Year 2016-2018 Awards

**99**

Total number of awards issued by DTRA

**\$37.2 million**

Total value (base and all options) of awards issued by DTRA



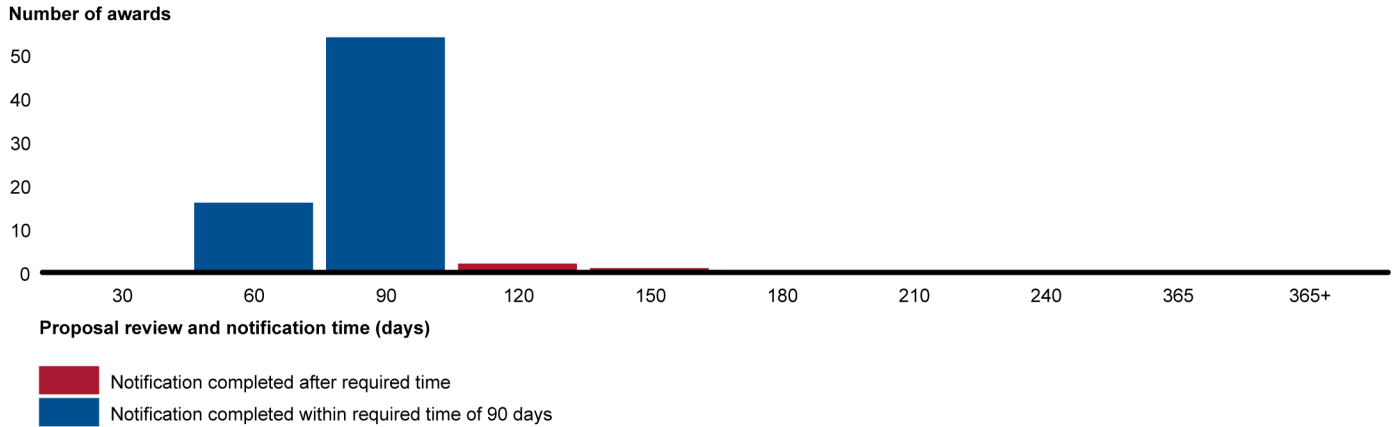
Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



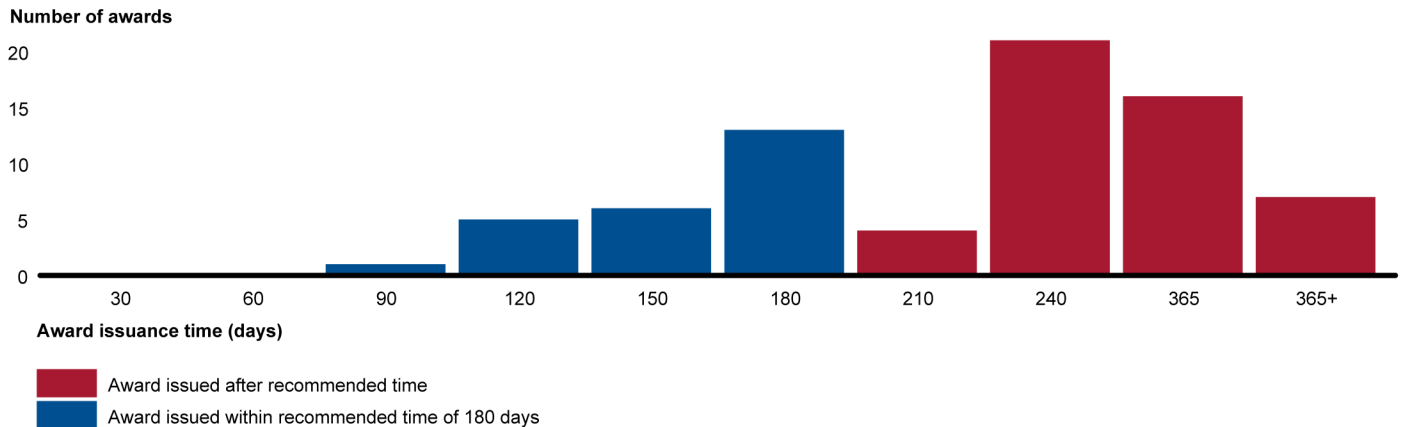
# JOINT SCIENCE AND TECHNOLOGY OFFICE FOR CHEMICAL AND BIOLOGICAL DEFENSE

CBD participated in SBIR and STTR.

## Small Business Award Timeliness (Fiscal Year 2016-2018 Awards)



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620

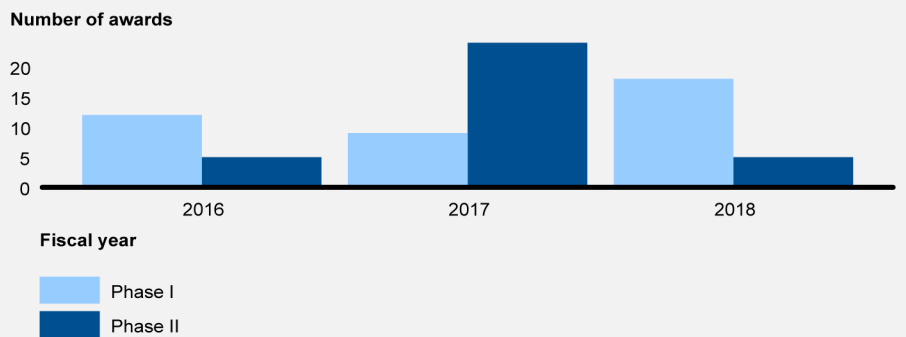
### Fiscal Year 2016-2018 Awards

**73**

Total number of awards issued by CBD

**\$40.1 million**

Total value (base and all options) of awards issued by CBD



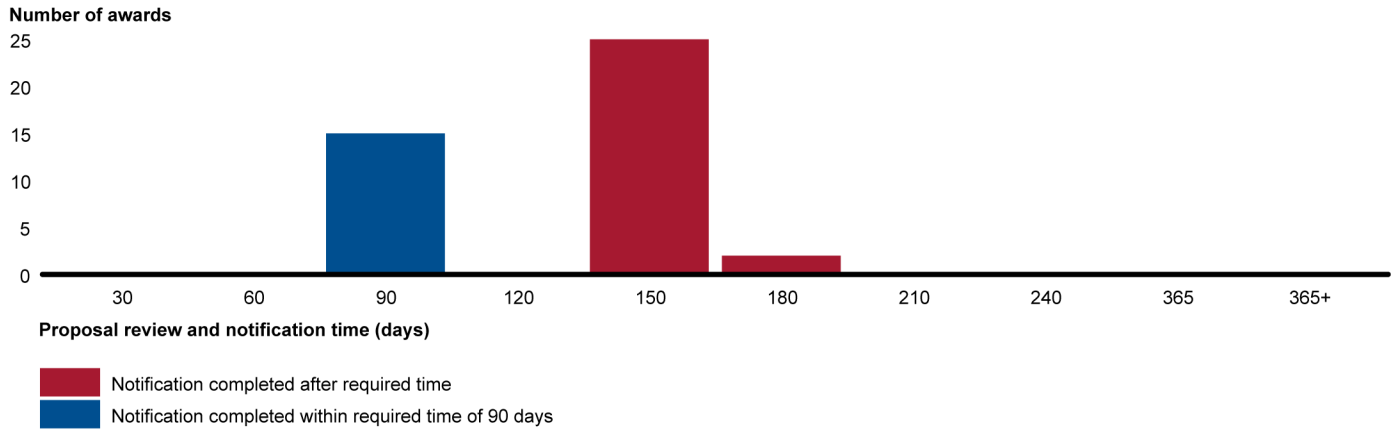
Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



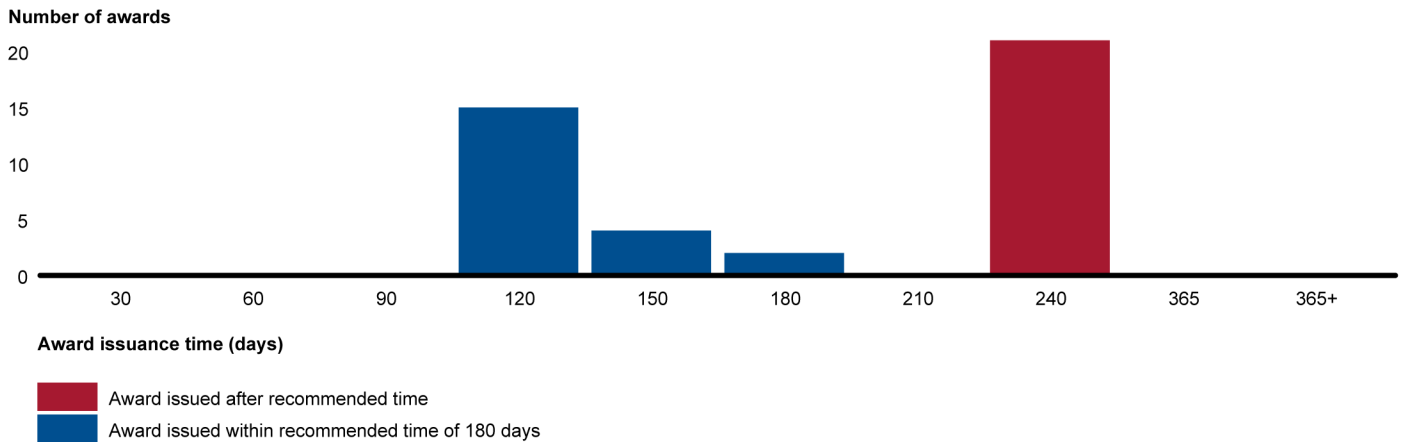
# NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY

NGA participated in SBIR and STTR.

## Small Business Award Timeliness (Fiscal Year 2016-2018 Awards)



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620

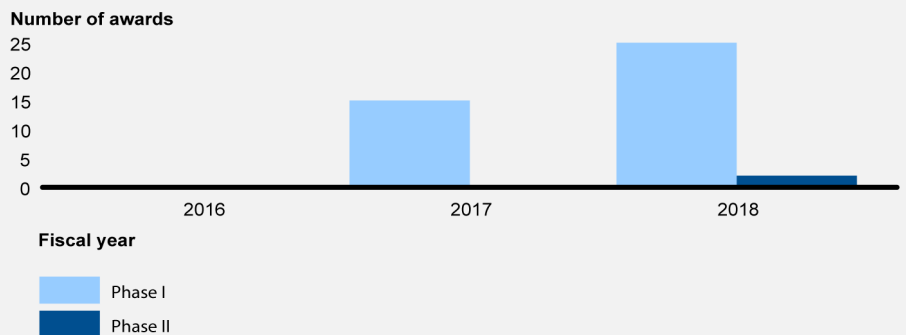
## Fiscal Year 2016-2018 Awards

**42**

Total number of awards issued by NGA

**\$6.0 million**

Total value (base and all options) of awards issued by NGA



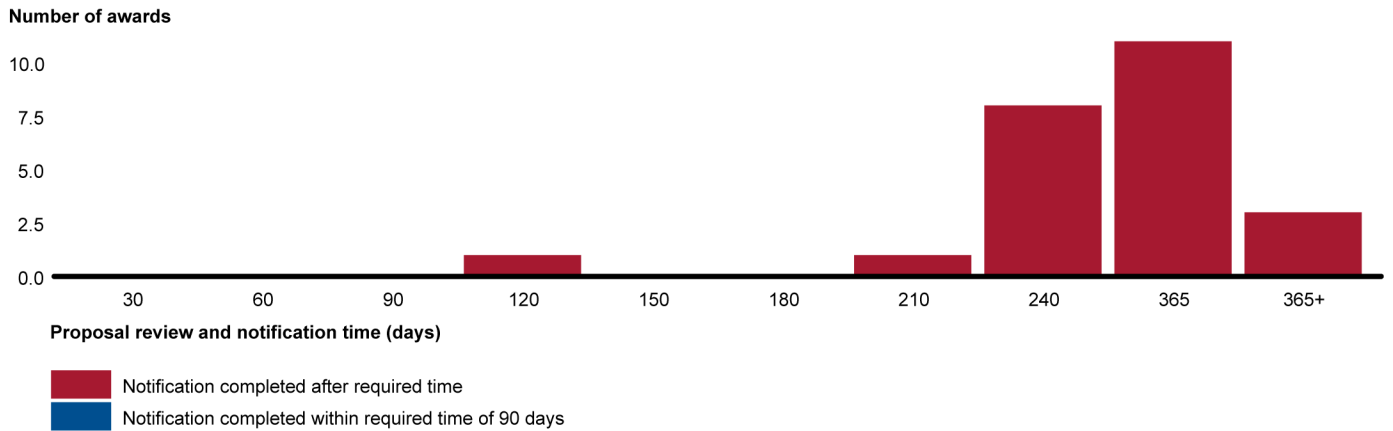
Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



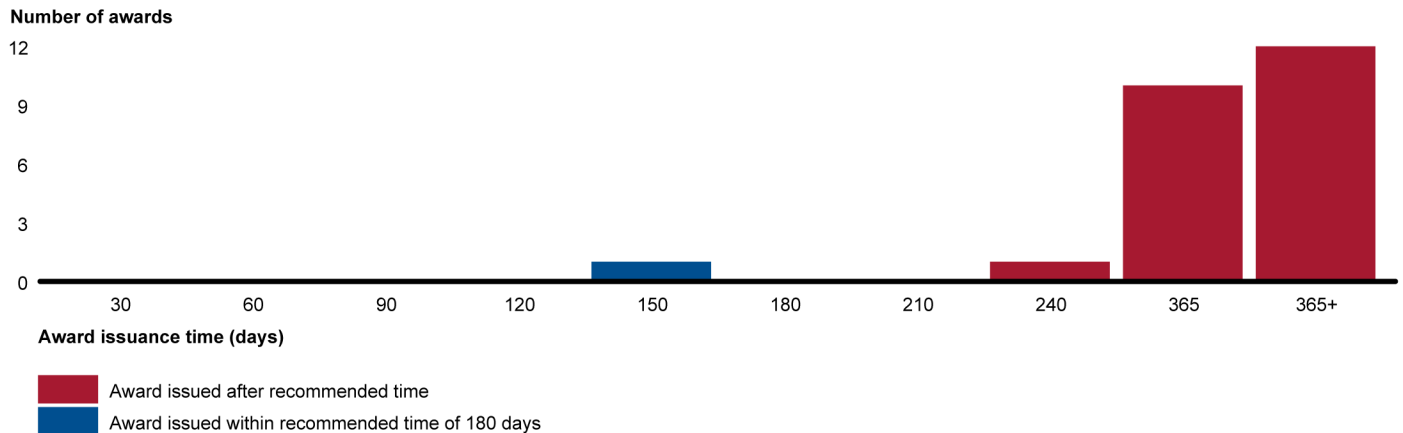
# DEFENSE MICROELECTRONICS ACTIVITY

DMEA participated in SBIR and STTR.

## Small Business Award Timeliness (Fiscal Year 2016-2018 Awards)



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620

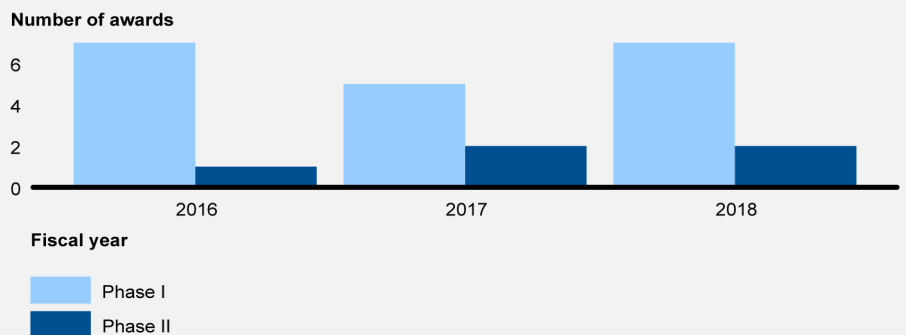
## Fiscal Year 2016-2018 Awards

**24**

Total number of awards issued by DMEA

**\$7.8 million**

Total value (base and all options) of awards issued by DMEA



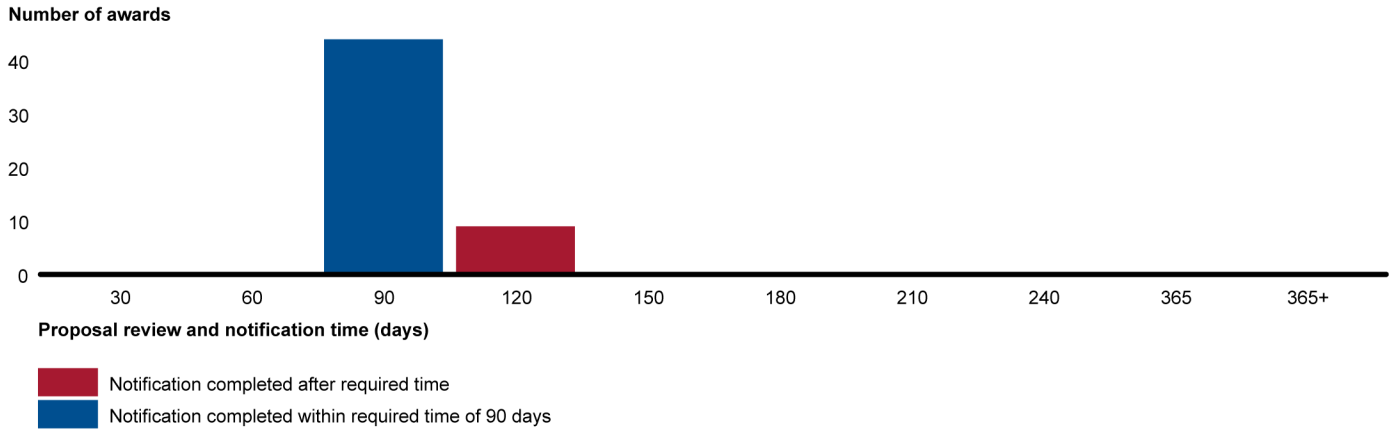
Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



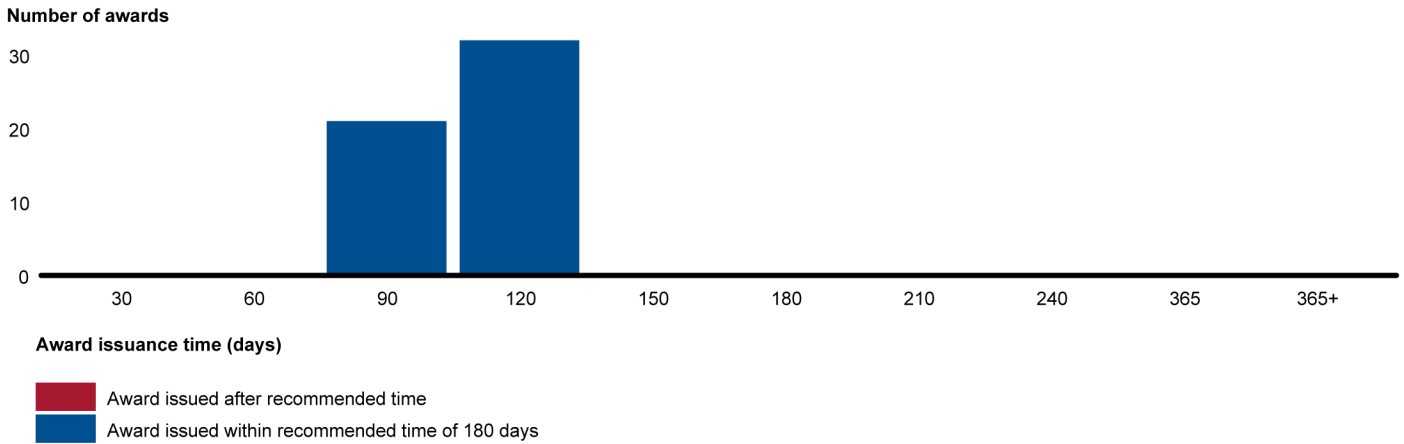
# DEPARTMENT OF EDUCATION

Education participated in SBIR only.

## Small Business Award Timeliness (Fiscal Year 2016-2018 Awards)



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620

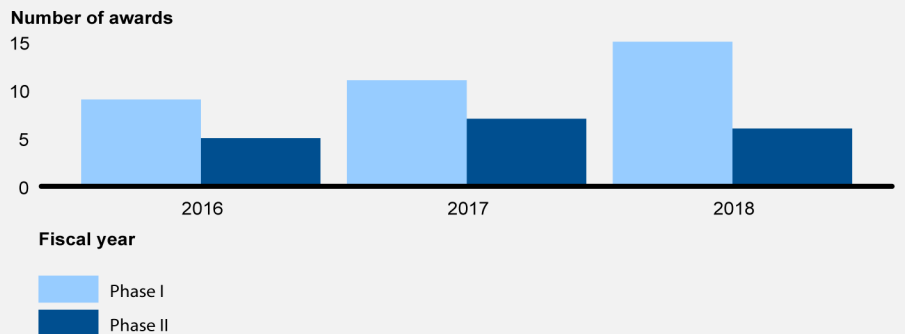
## Fiscal Year 2016-2018 Awards

**53**

Total number of awards issued by Education

**\$22.1 million**

Total value (base and all options) of awards issued by Education



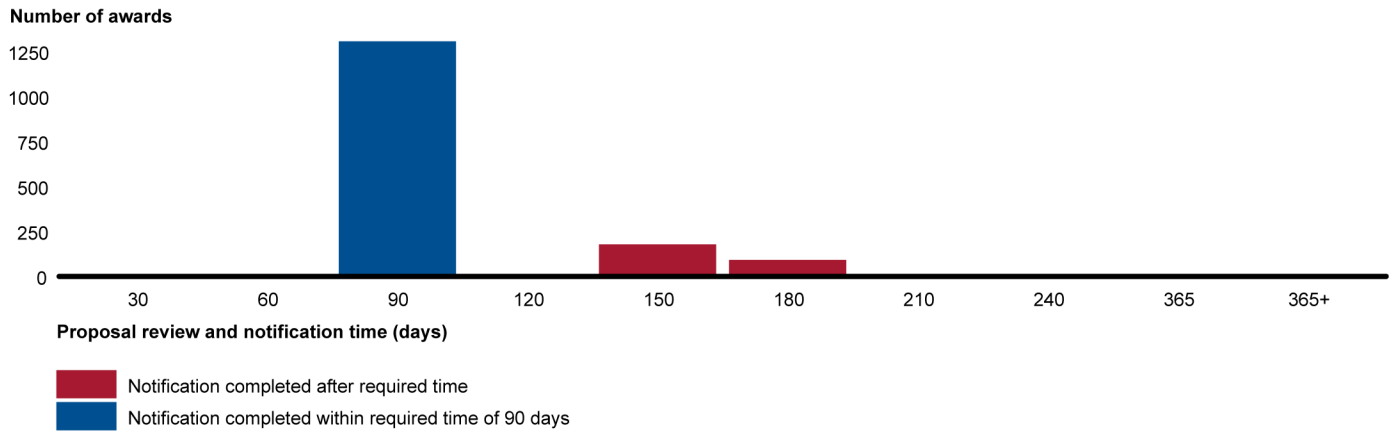
Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



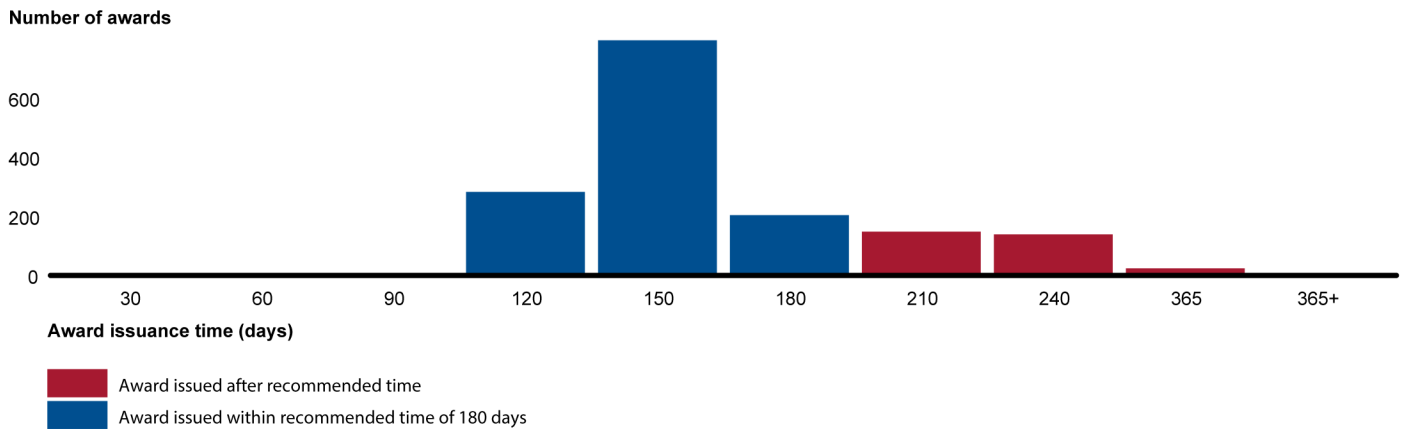
# OFFICE OF SCIENCE

Office of Science participated in SBIR and STTR.

## Small Business Award Timeliness (Fiscal Year 2016-2018 Awards)



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620

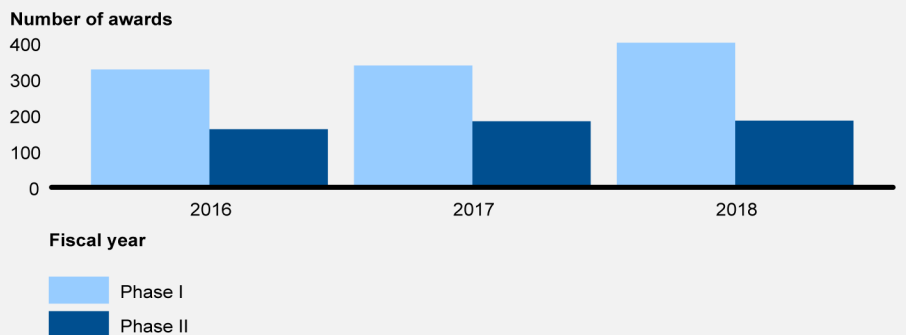
## Fiscal Year 2016-2018 Awards

# 1595

Total number of awards issued by Office of Science

# \$726.3 million

Total value (base and all options) of awards issued by Office of Science



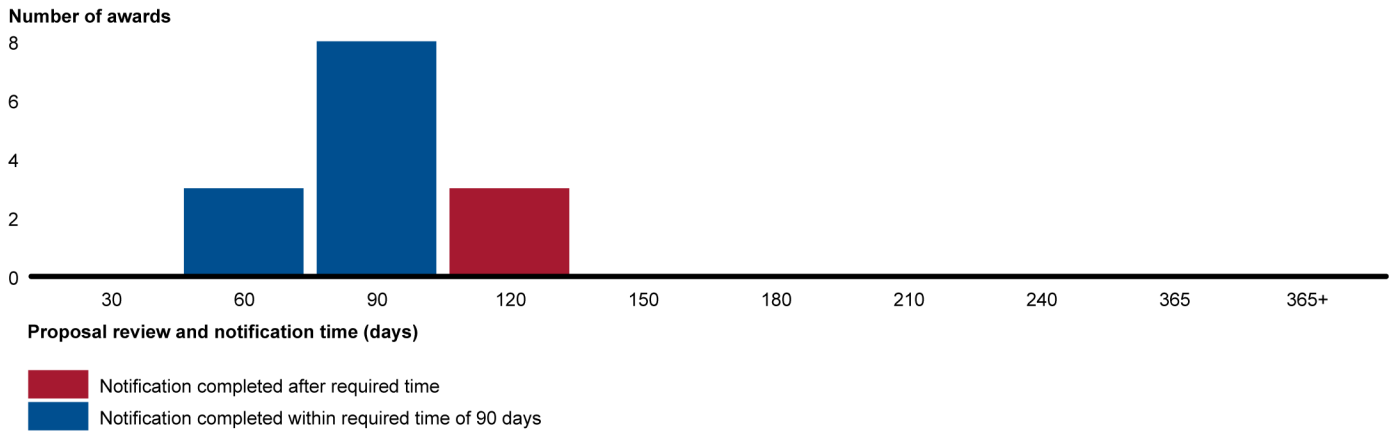
Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



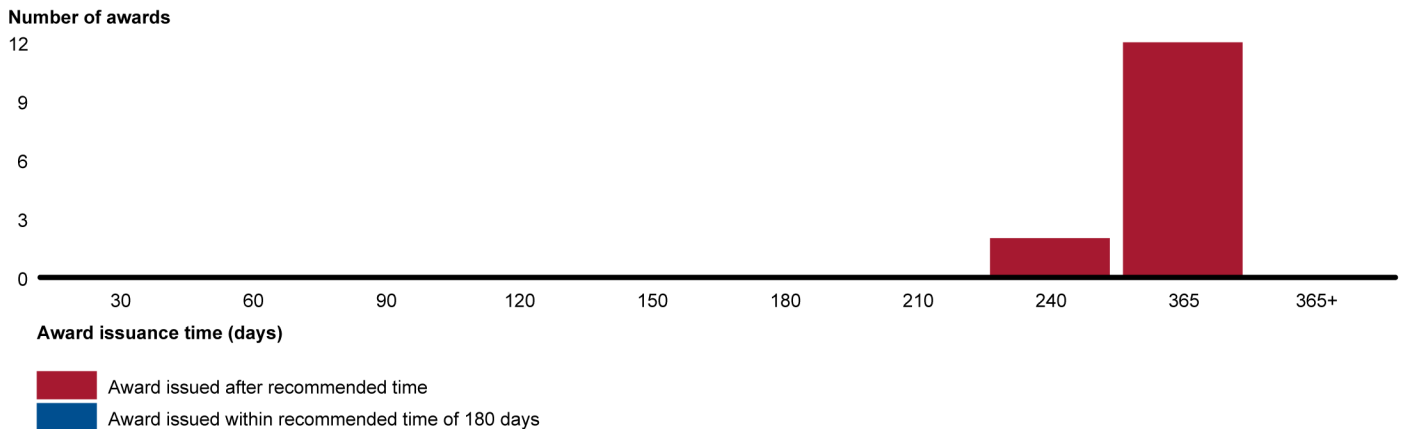
# ADVANCED RESEARCH PROJECTS AGENCY-ENERGY

ARPA-E participated in SBIR and STTR.

## Small Business Award Timeliness (Fiscal Year 2016-2018 Awards)



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620

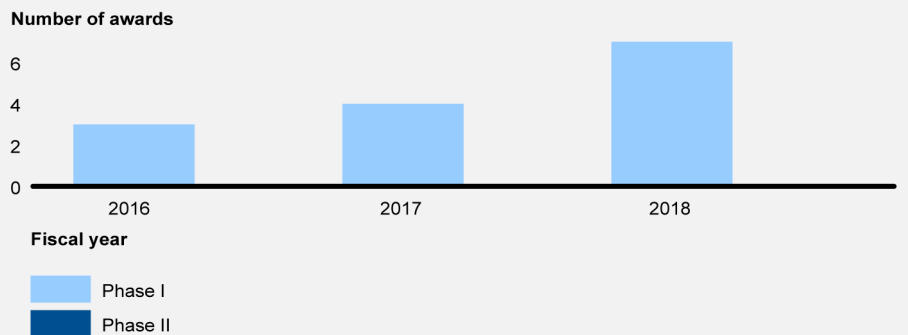
### Fiscal Year 2016-2018 Awards

**14**

Total number of awards issued by ARPA-E

**\$25.1 million**

Total value (base and all options) of awards issued by ARPA-E



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620

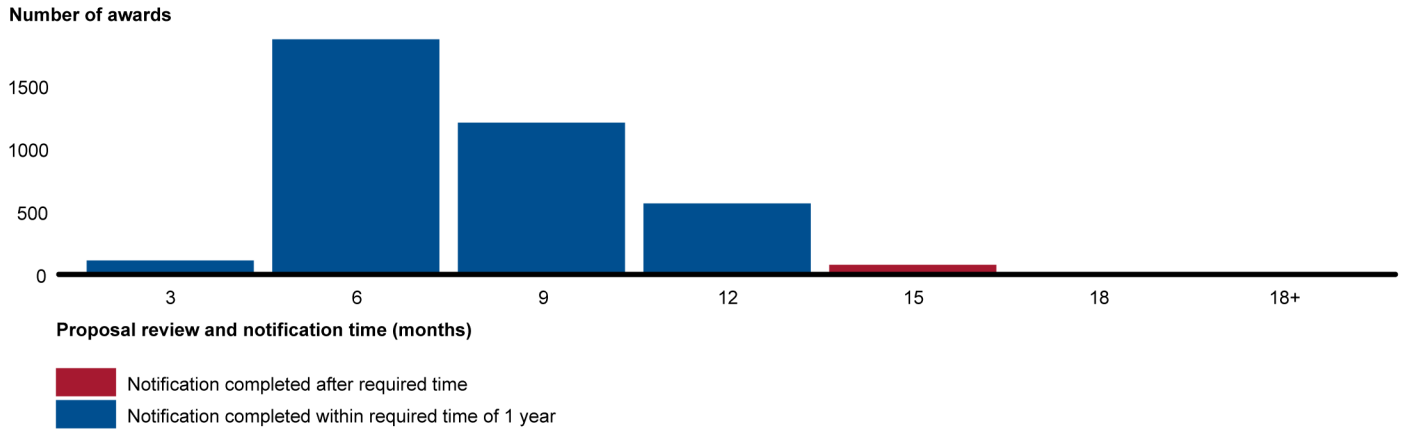
Note: Phase I awards at ARPA-E include options for subsequent phase II awards. We include only the initial phase I notification and award in this review.



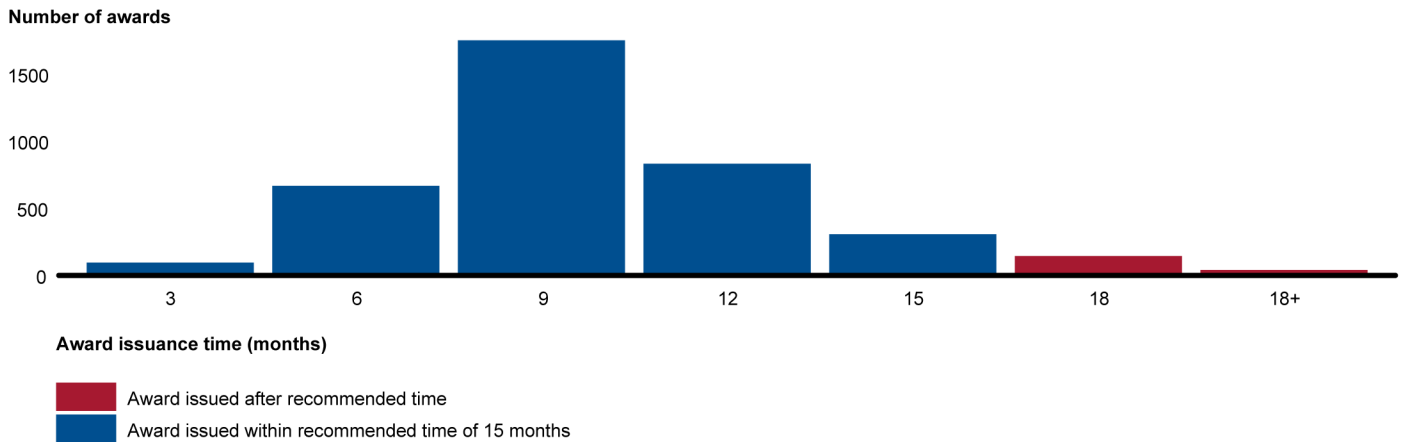
# NATIONAL INSTITUTES OF HEALTH

NIH participated in SBIR and STTR.

## Small Business Award Timeliness (Fiscal Year 2016-2018 Awards)



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620

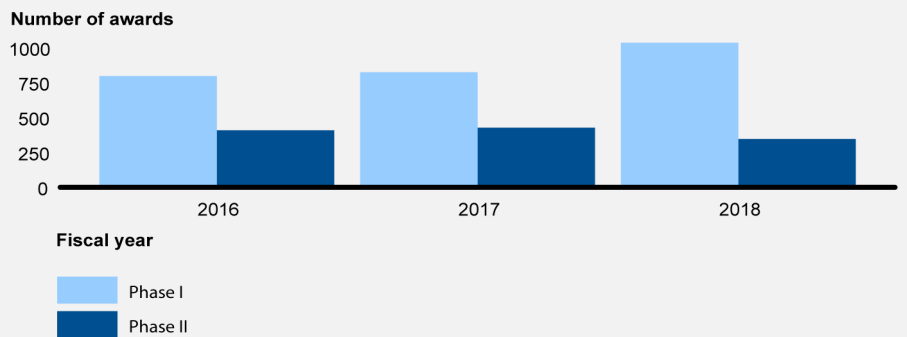
## Fiscal Year 2016-2018 Awards

**3840**

Total number of awards issued by NIH

**\$2.3 billion**

Total value (base and all options) of awards issued by NIH



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620

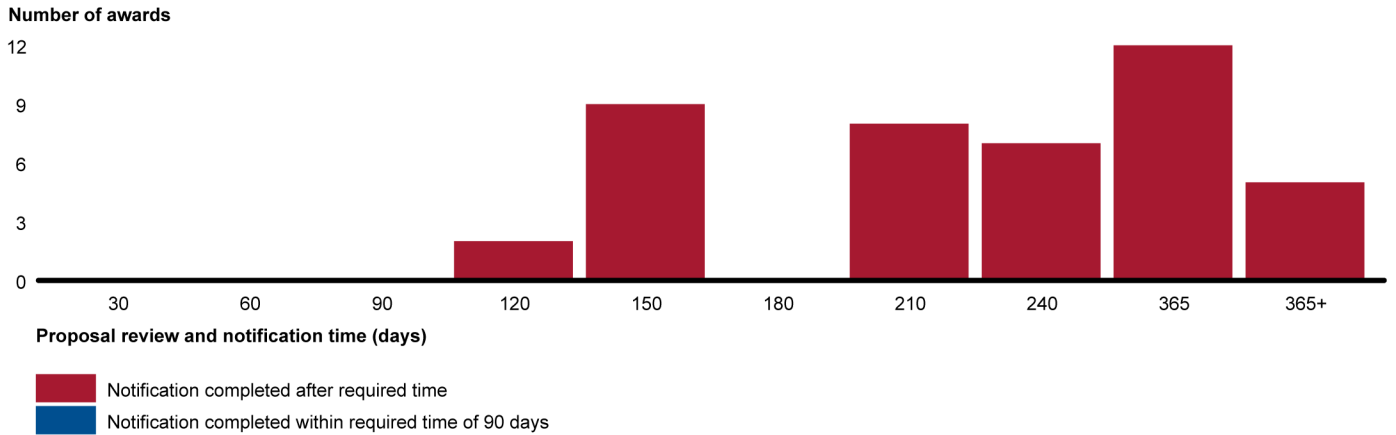




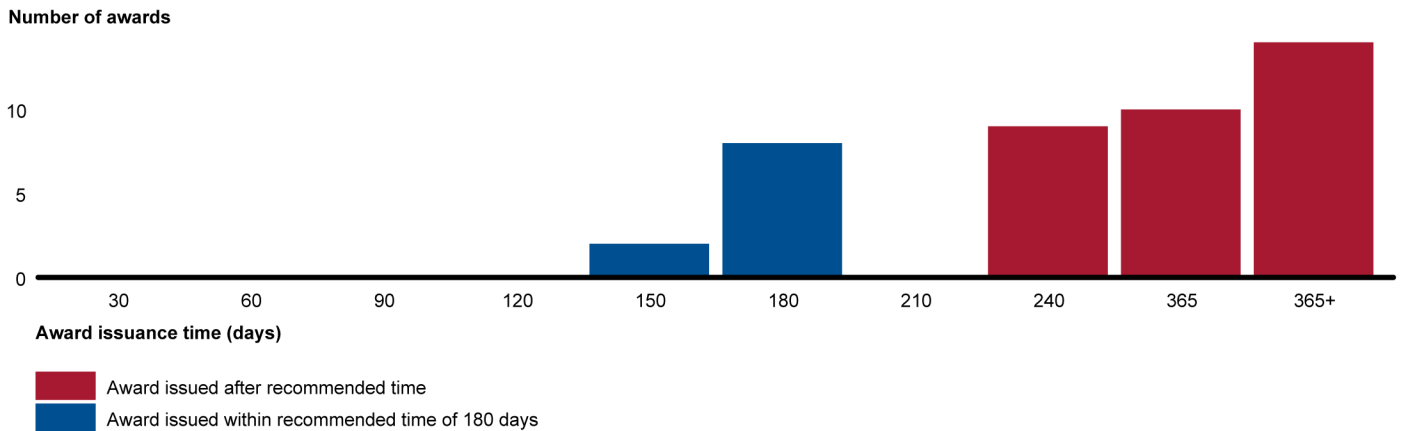
# CENTERS FOR DISEASE CONTROL AND PREVENTION

CDC participated in SBIR only.

## Small Business Award Timeliness (Fiscal Year 2016-2018 Awards)



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620

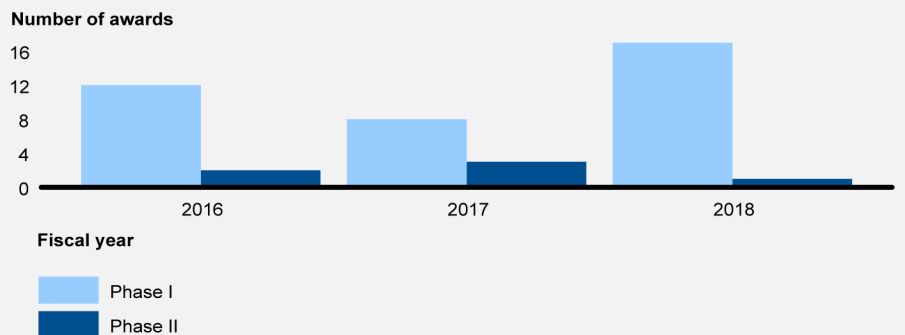
## Fiscal Year 2016-2018 Awards

**43**

Total number of awards issued by CDC

**\$12.2 million**

Total value (base and all options) of awards issued by CDC



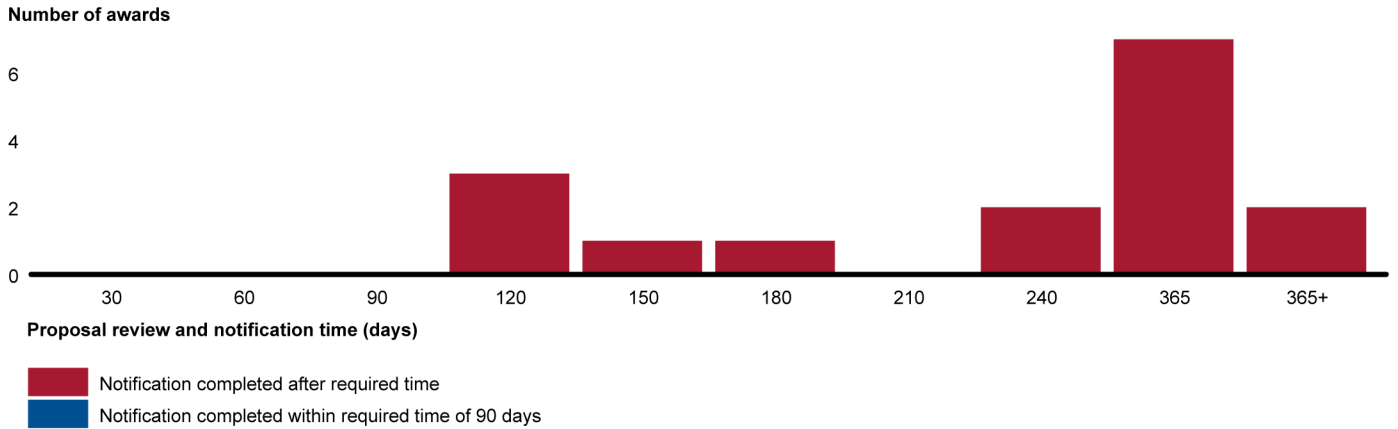
Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



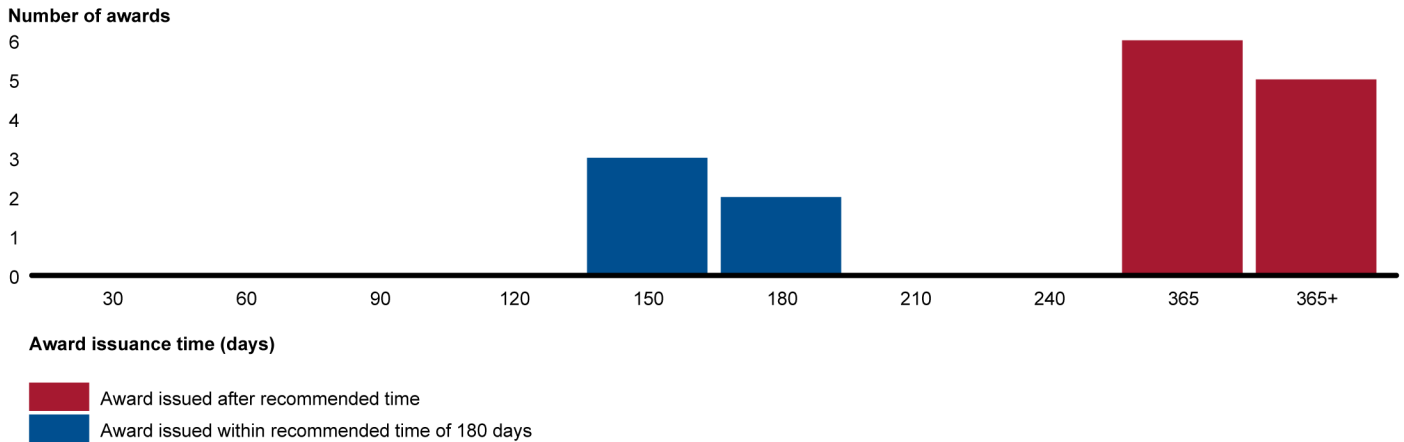
# FOOD AND DRUG ADMINISTRATION

FDA participated in SBIR only.

## Small Business Award Timeliness (Fiscal Year 2016-2018 Awards)



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620

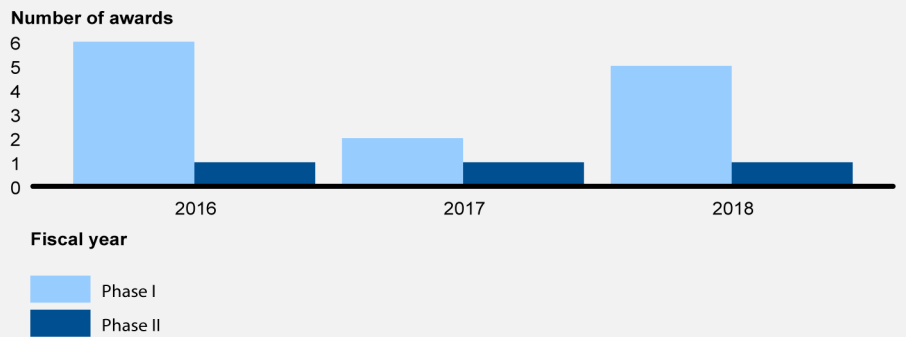
### Fiscal Year 2016-2018 Awards

**16**

Total number of awards issued by FDA

**\$4.7 million**

Total value (base and all options) of awards issued by FDA



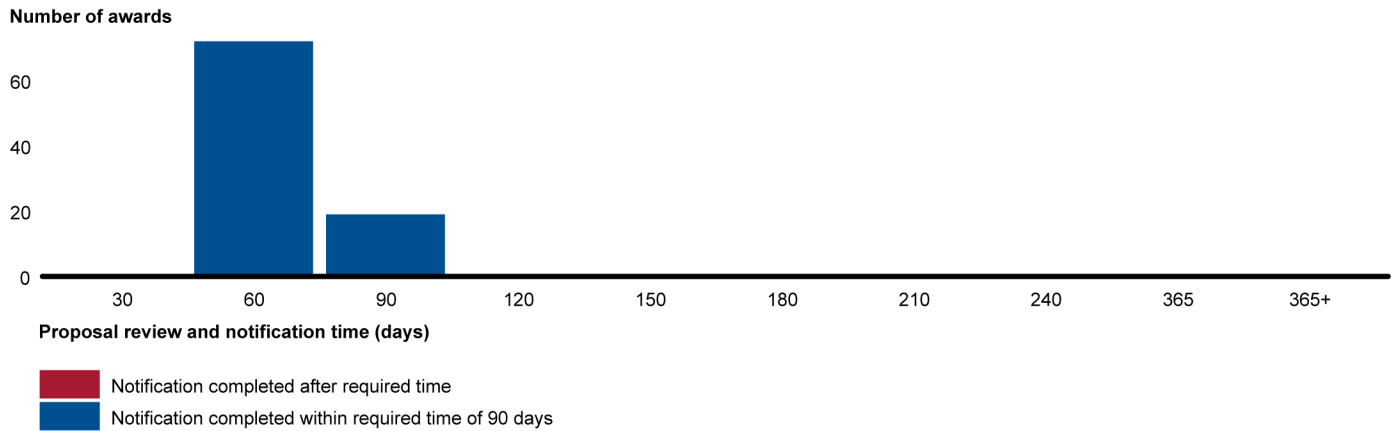
Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



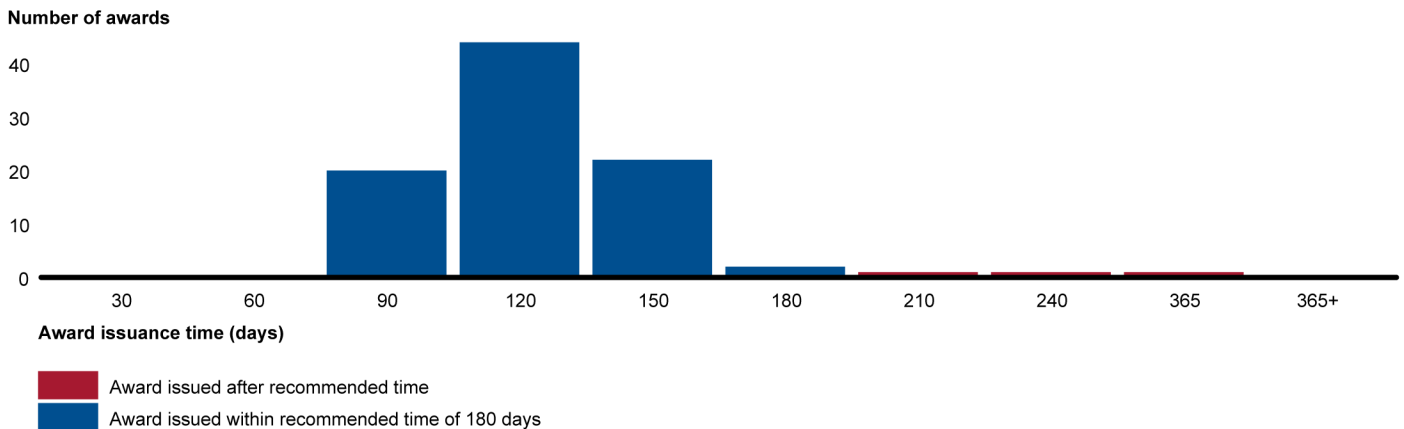
# SCIENCE AND TECHNOLOGY DIRECTORATE

DHS S&T participated in SBIR only.

## Small Business Award Timeliness (Fiscal Year 2016-2018 Awards)



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620

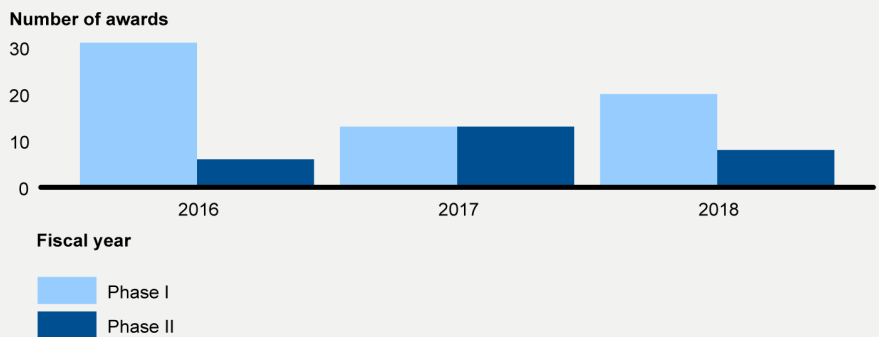
### Fiscal Year 2016-2018 Awards

**91**

Total number of awards issued by DHS S&T

**\$30.3 million**

Total value (base and all options) of awards issued by DHS S&T



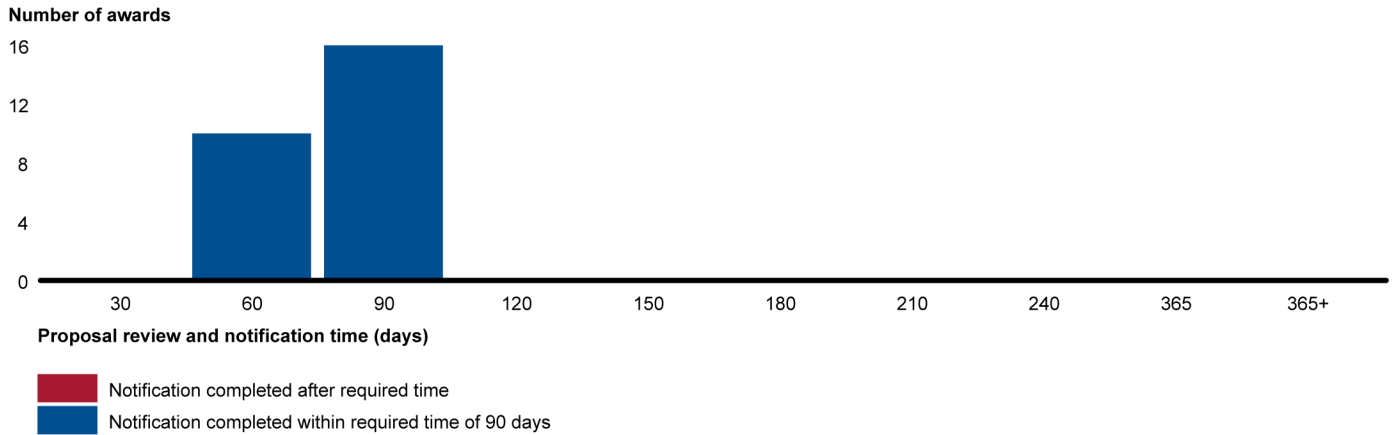
Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



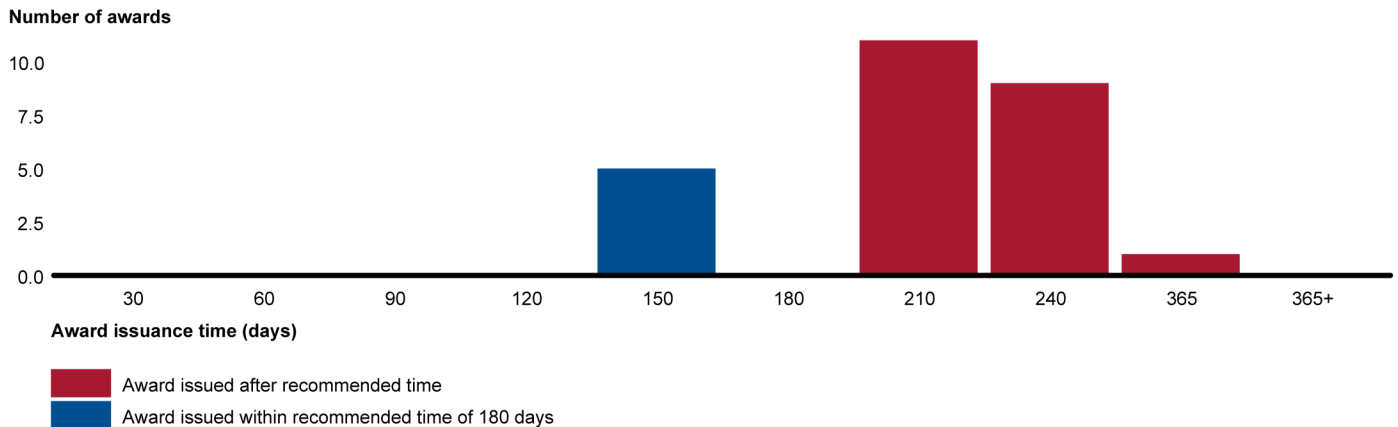
# DOMESTIC NUCLEAR DETECTION OFFICE

DNDO participated in SBIR only.

## Small Business Award Timeliness (Fiscal Year 2016-2018 Awards)



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620

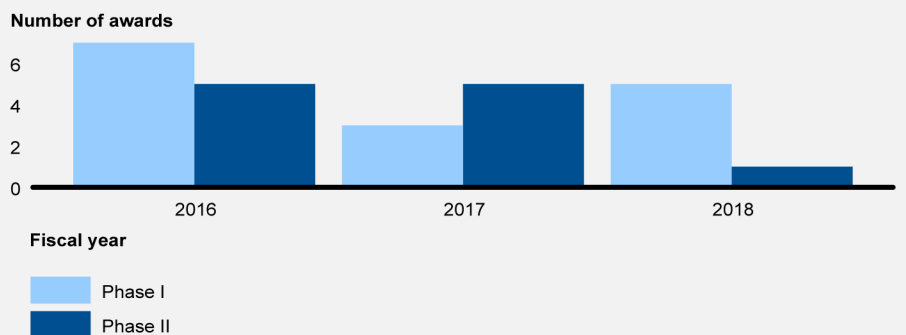
## Fiscal Year 2016-2018 Awards

**26**

Total number of awards issued by DNDO

**\$13.1 million**

Total value (base and all options) of awards issued by DNDO



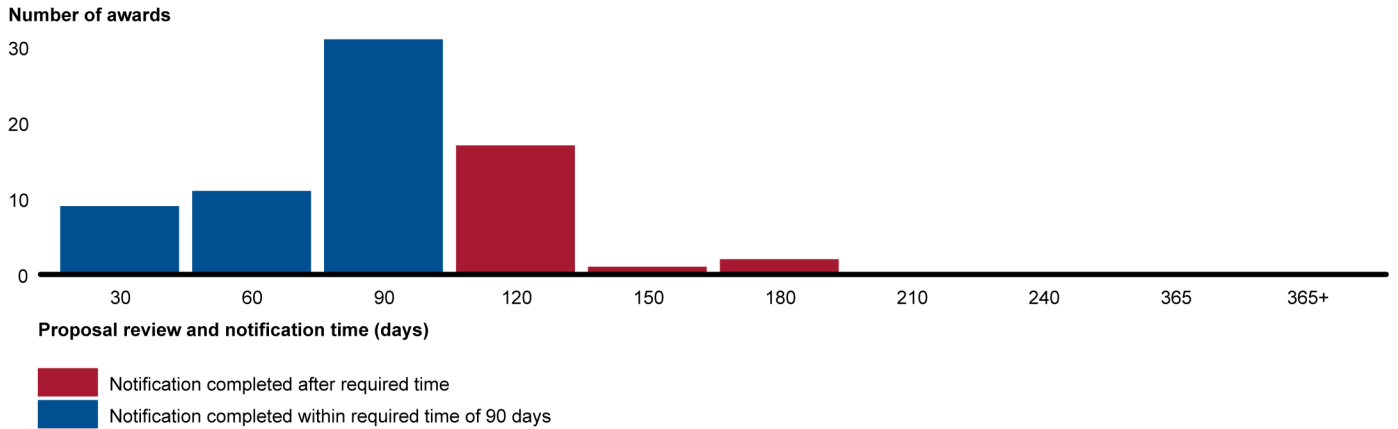
Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



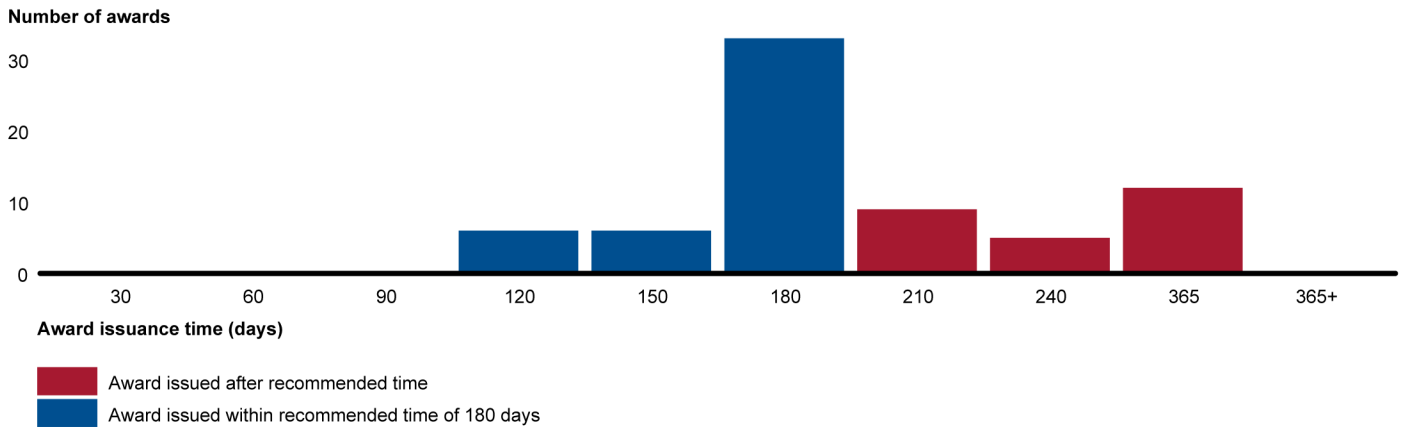
# DEPARTMENT OF TRANSPORTATION

DOT participated in SBIR only.

## Small Business Award Timeliness (Fiscal Year 2016-2018 Awards)



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620

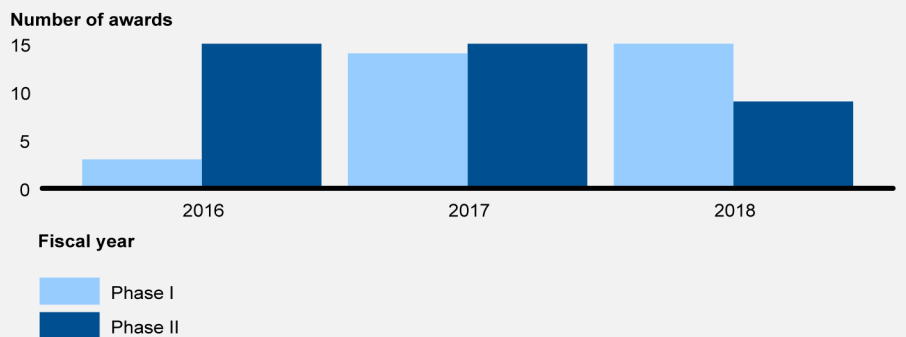
### Fiscal Year 2016-2018 Awards

**71**

Total number of awards issued by DOT

**\$27.2 million**

Total value (base and all options) of awards issued by DOT



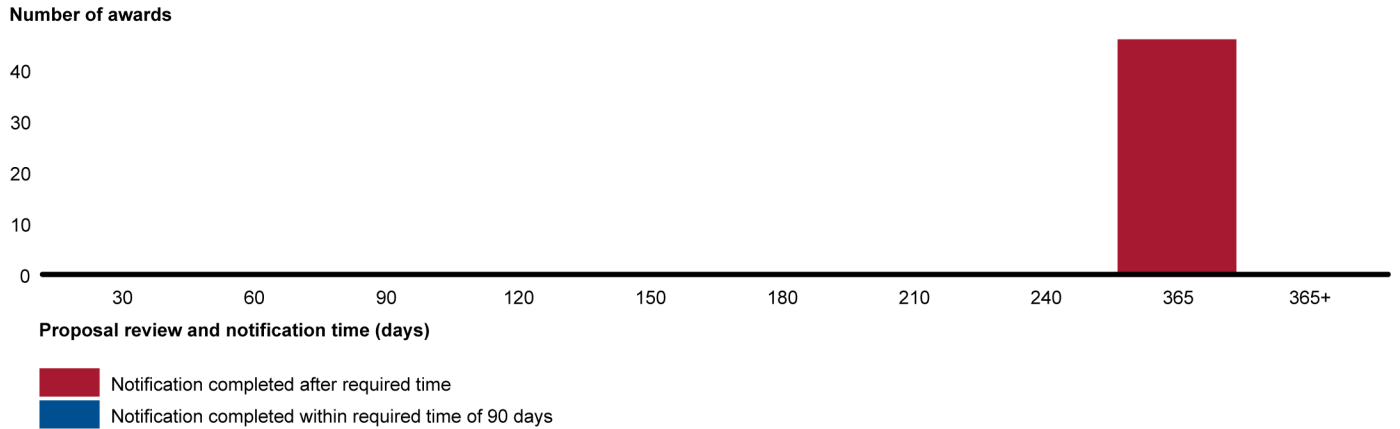
Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



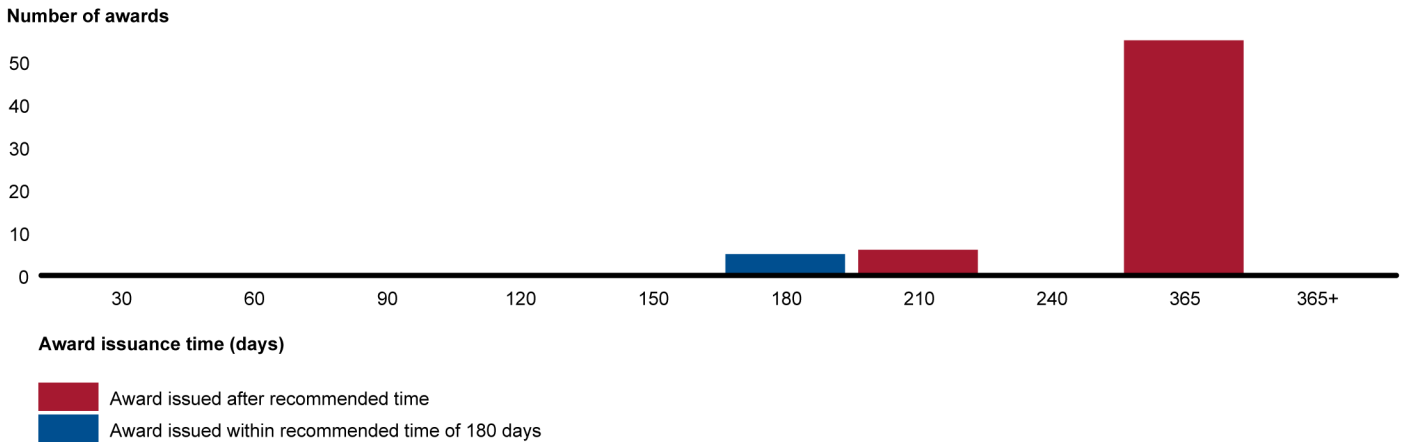
# ENVIRONMENTAL PROTECTION AGENCY

EPA participated in SBIR only.

## Small Business Award Timeliness (Fiscal Year 2016-2018 Awards)



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620

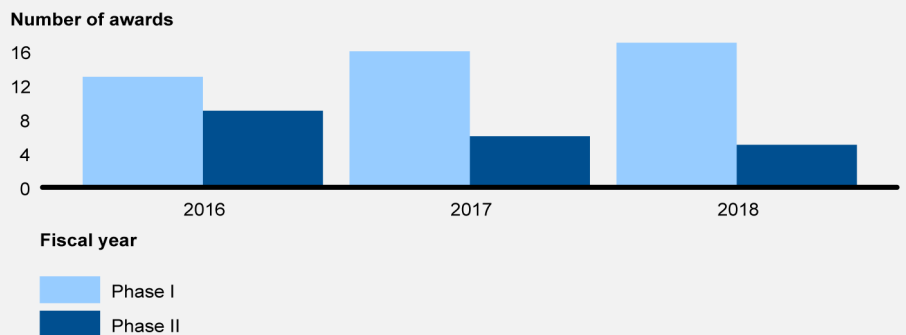
## Fiscal Year 2016-2018 Awards

**66**

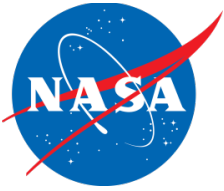
Total number of awards issued by EPA

**\$10.6 million**

Total value (base and all options) of awards issued by EPA



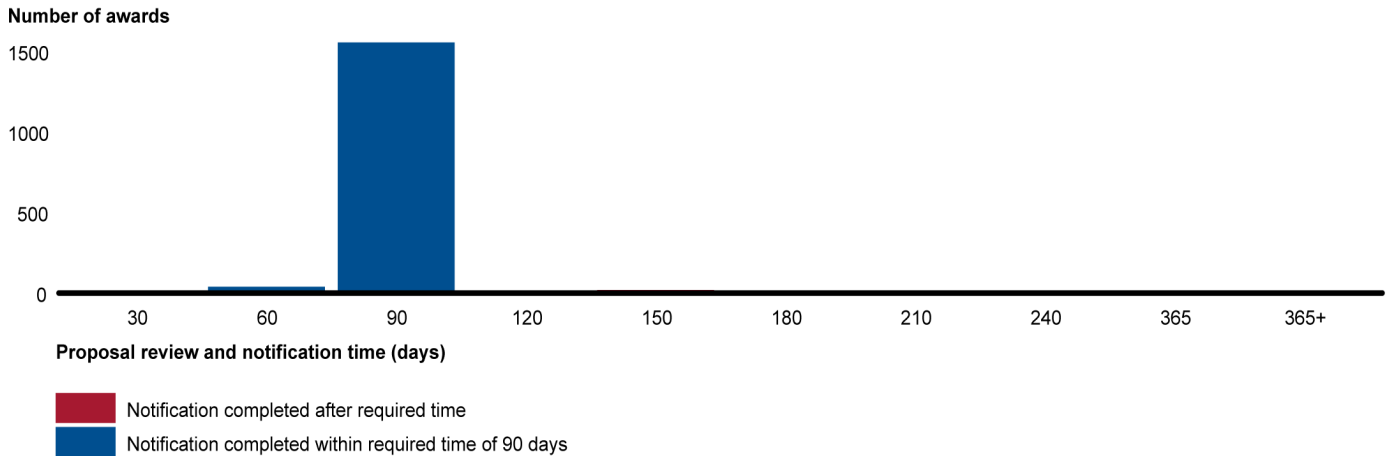
Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



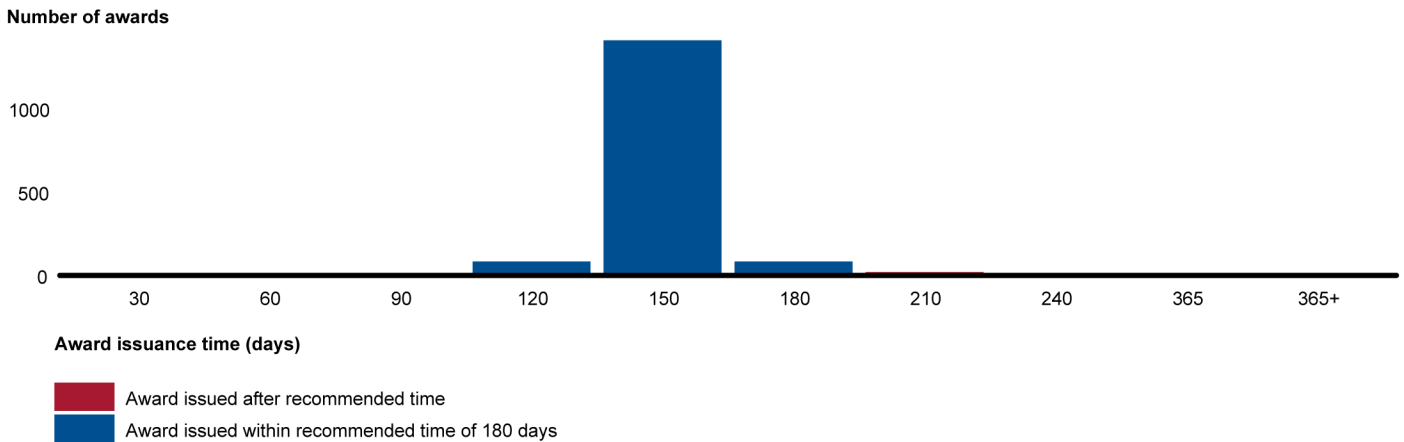
# NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

NASA participated in SBIR and STTR.

## Small Business Award Timeliness (Fiscal Year 2016-2018 Awards)



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620

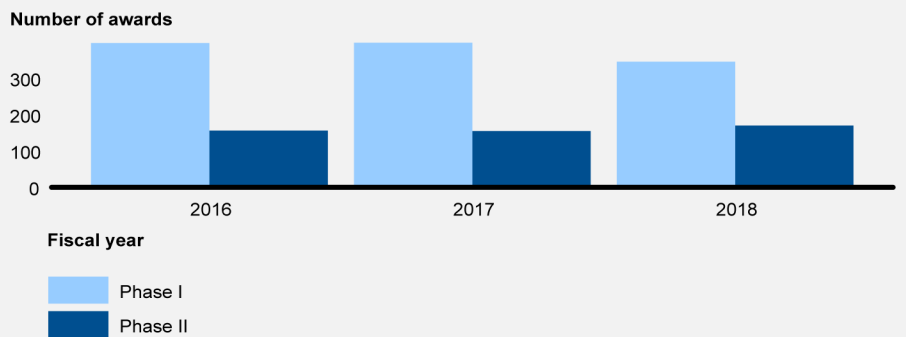
### Fiscal Year 2016-2018 Awards

**1622**

Total number of awards issued by NASA

**\$504.1 million**

Total value (base and all options) of awards issued by NASA



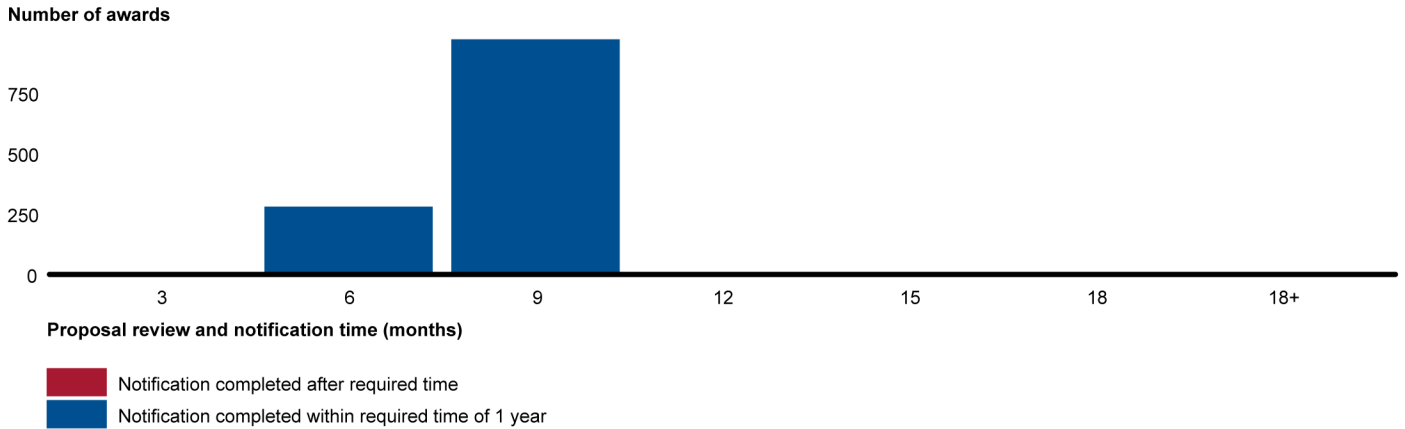
Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



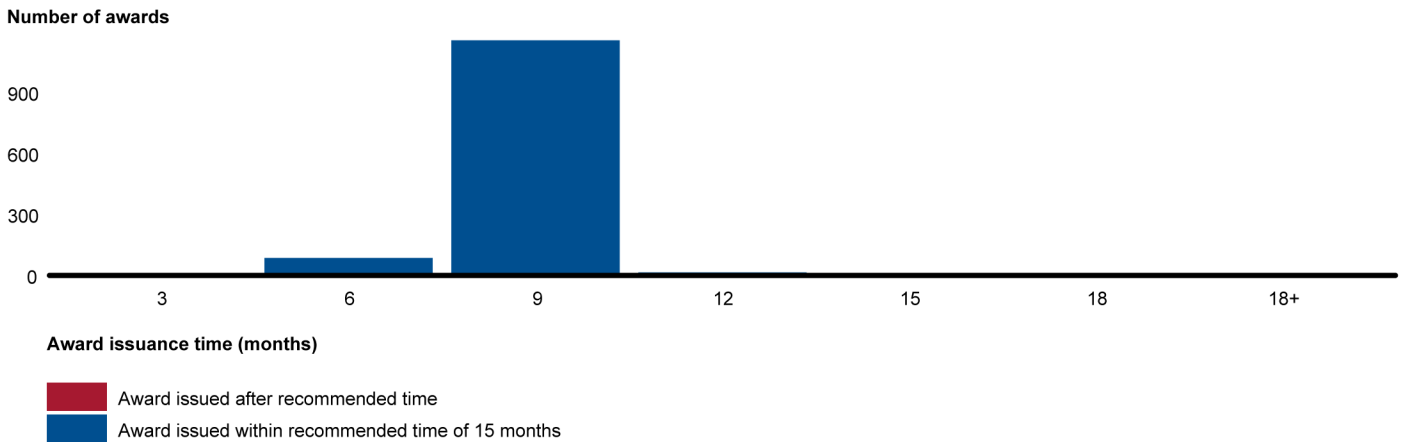
# NATIONAL SCIENCE FOUNDATION

NSF participated in SBIR and STTR.

## Small Business Award Timeliness (Fiscal Year 2016-2018 Awards)



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620

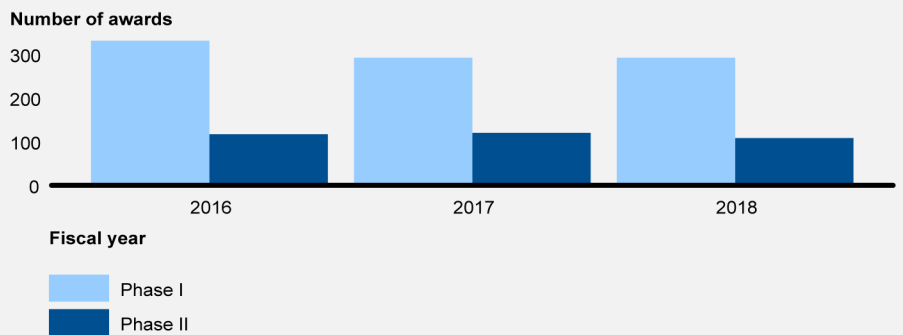
## Fiscal Year 2016-2018 Awards

**1260**

Total number of awards issued by NSF

**\$446.3 million**

Total value (base and all options) of awards issued by NSF

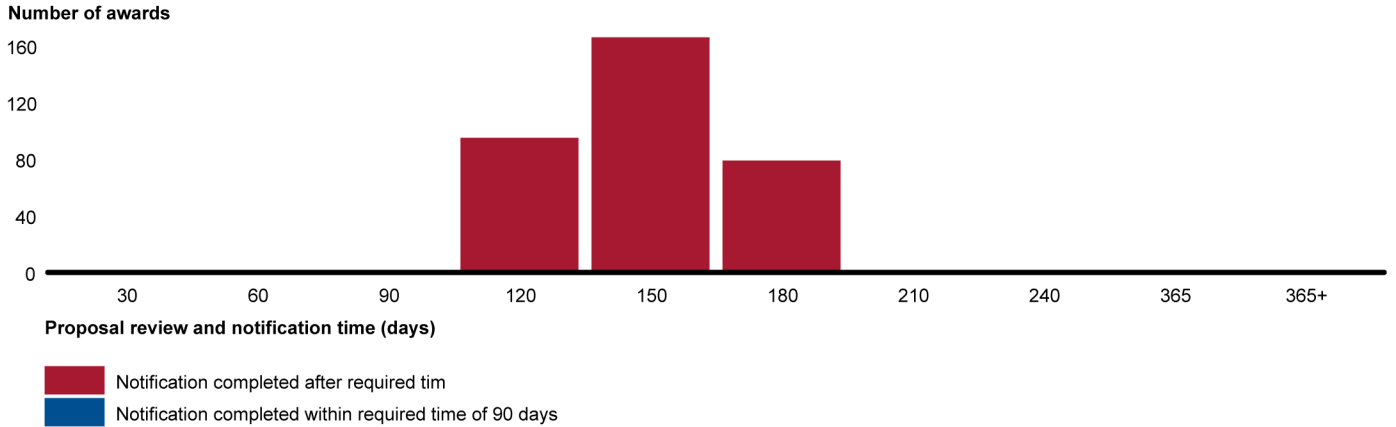


Source: GAO analysis of SBIR and STTR award data. | GAO-19-620

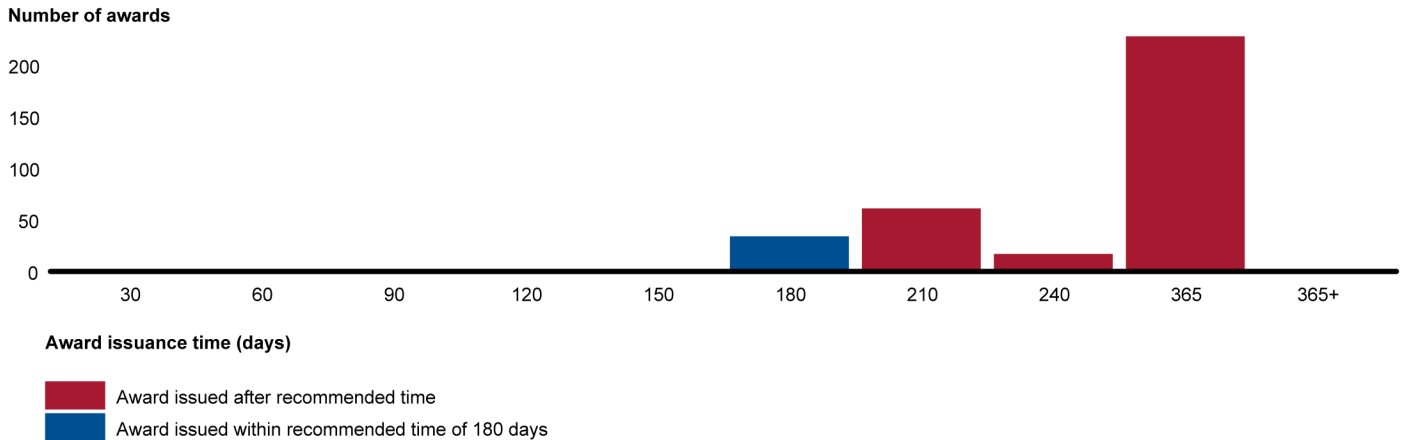




**Small Business Award Timeliness (Fiscal Year 2016-2018 Awards)**



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620

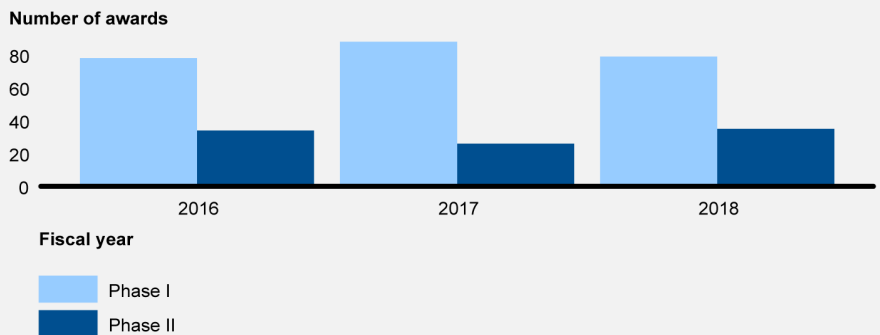
**Fiscal Year 2016-2018 Awards**

**340**

Total number of awards issued by USDA

**\$80.7 million**

Total value (base and all options) of awards issued by USDA



Source: GAO analysis of SBIR and STTR award data. | GAO-19-620

# Appendix II: Comments from Small Business Administration



U.S. Small Business  
Administration

## SBA Comments for GAO Draft Report 19-620

Small Business Research Programs (103341)

September 10, 2019

John Neumann  
Managing Director  
Science, Technology Assessment and Analytics Team  
U.S. Government Accountability Office  
441 G Street, NW  
Washington, DC 20548

Dear Mr. Neumann:

Thank you for providing the U.S. Small Business Administration (SBA) with a copy of the Government Accountability Office (GAO) draft report titled: *"Small Business Research Programs: Many Agencies Took Longer to Issue Small Business Awards than Recommended (GAO-19-620)."*

***NDAA FY2019 included a provision for GAO to report on the timeliness of agencies' SBIR and STTR proposal review and award issuance.***

SBA's main concerns with this report are as follows:

- 1) Section 854(b) of the National Defense Authorization Act for Fiscal Year 2019 amends section 9(hh) of the Small Business Act to require the U.S. Department of Defense (DoD) to establish a pilot program that will reduce several timeframes in the SBIR/STTR award process, including the time from: (1) the close of an SBIR or STTR solicitation for a Phase I or Phase II award to the date of award; (2) the end of a Phase I SBIR or STTR award to the start of a Phase II SBIR or STTR award; (3) the close of an SBIR or STTR solicitation for a Phase II award that skips Phase I to the date of award; and (4) between Phase II awards for sequential Phase II awards. While the statutory language directing GAO's report describes a study of the time to "review and make final decisions" on SBIR or STTR proposals, the aforementioned statutory amendments emphasize the importance of reducing the time between the end of the Phase I and start of the Phase II. It seems participating agencies expect the small business to ensure the staff and resources are ready when the agency decides to move forward with the Phase II which places a burden on that business. Reducing the time to make a final decision and award the Phase II as measured from the end of the Period of Performance (PoP) of the Phase I is one of the most critical to a small business. SBA respectfully suggests that GAO expand the data gathered in the following year reports to track this information and document best practices as well as recommendations that can be implemented to reduce the relevant time frames.

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**Appendix II: Comments from Small Business Administration**

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- 2) The report indicates that the time from the close of the solicitation to award is the same for Phase I awards and Phase II awards for all agencies. This does not align with SBA's observations of participating agencies' processes, specifically the DoD contracting process. The chart on page 17 shows a difference between Fixed Price Contracts and Cost-Type Contracts. In DoD contracting, Phase Is are often Fixed Priced and Phase IIs Cost-Type, so this would seem to indicate that there is a difference in issuance time between Phase I and II awards. Providing data broken down by phase, type of contract, and "Component Agencies" would be helpful in the following year study.
- 3) The term "issued date" is used throughout this document and it is unclear what that date means. Other terms like "award date," "proposal submission date," and "notification of decision" are used in this document and in the FY19 NDAA, as well as the terms discussing time it takes to "review" and "make a final decision." SBA has found that a major problem in tracking and reporting this type of data is that agencies use different terminology and definitions. SBA recommends GAO define the terminology described in this report and ensure that agencies are providing data that matches those definitions. SBA believes this would help to provide a clearer and more consistent picture of agency processes and timelines.
- 4) Why is the data on the number of Phase I and II awards by year of award included in the charts starting on page 21? These charts seem to indicate the number of Phase I awards that then move to Phase II award for each component agency. It appears that in some years and some agencies the majority of the Phase I awards move to Phase II and other times a much smaller number of Phase I awards move to Phase II. SBA's annual reports demonstrate that for most agencies, on average 40 to 60 percent of the Phase Is make it to Phase II. The agencies are the best ones to verify this data and SBA suggests that the agencies validate that information and that GAO include additional text to help the reader better understand the chart.

If you have any questions about these comments, please contact SBA's GAO Liaison at (202) 205-7694, or email [sba-gao-liaison@sba.gov](mailto:sba-gao-liaison@sba.gov).

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 III: Comments from Department of Defense



RESEARCH  
AND ENGINEERING

OFFICE OF THE UNDER SECRETARY OF DEFENSE  
3030 DEFENSE PENTAGON  
WASHINGTON, DC 20301-3030

Mr. John Neumann  
Managing Director, Science, Technology Assessment, and Analytics  
U.S. Government Accountability Office  
441 G Street, N.W.  
Washington, DC 20548

Dear Mr. Neumann:

The Department of Defense (DoD) reviewed the Government Accountability Office (GAO) Draft Report, GAO-19-620, "SMALL BUSINESS RESEARCH PROGRAMS: Many Agencies Took Longer to Issue Small Business Awards than Recommended" dated September 2019, and submits the following comments for consideration.

- a. The Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) policy directive recommends that most agencies issue Phase I awards in no more than 180 calendar days from solicitation to close, and this report does not differentiate between Phase I and Phase II data.
- b. Phase I and Phase II data should be analyzed separately in future reports.
- c. The SBIR and STTR programs allow for second Phase II follow-on projects that may not be awarded for several years after the end of the initial Phase II; therefore, these awards, which are commonly referred to as "reach-backs" or "cross-agency awards," should not be included in the analysis of Phase II award timelines. If data pertaining to second Phase II follow-on projects is of interest, a separate analysis should be accomplished.

Thank you for the opportunity to provide comments to the report.

Sincerely,

A handwritten signature in blue ink that reads "Molly L. Walsh".

Molly L. Walsh  
Director, Small Business and Technology  
Partnerships

# Appendix IV: Comments from Department of Education



UNITED STATES DEPARTMENT OF EDUCATION  
Institute of Education Sciences

September 10, 2019

Mr. John Neumann  
Managing Director  
Science, Technology Assessment, and Analytics  
Government Accountability Office  
441 G Street, NW  
Washington, DC 20548

Dear Mr. Neumann:

Thank you for the opportunity to respond to the Government Accountability Office (GAO) draft report titled, *Small Business Research Programs: Many Agencies Took Longer to Issue Small Business Awards than Recommended* (GAO-19-620). The draft report found that the Department awarded 100 percent of Small Business Innovation Research (SBIR) program contracts within the required 180-day period and notified 83 percent of awardees within the required 90-day period, with all remaining notifications occurring within 91 days. We have taken steps to ensure that all future awardees under the SBIR program will be notified within 90 days.

Thank you for the opportunity to respond to the draft report. As indicated, we will use the information in this report to enhance our administration of the SBIR program.

Sincerely,

  
Craig Stanton  
Deputy Director

550 12 St. SW, WASHINGTON, D.C. 20202

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# Appendix V: GAO Contact and Staff Acknowledgments

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## GAO Contact

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John Neumann, (202) 512-6888 or [neumannj@gao.gov](mailto:neumannj@gao.gov)

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## Staff Acknowledgments

In addition to the contact named above, Rob Marek (Assistant Director), Tind Shepper Ryen (Analyst-in-Charge), Nora Adkins, David Aja, Jenny Chanley, Robert Letzler, Anika McMillon, Amanda Postiglione, and Ben Shouse made key contributions to this report.

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Orice Williams Brown, Managing Director, [WilliamsO@gao.gov](mailto:WilliamsO@gao.gov), (202) 512-4400,  
U.S. Government Accountability Office, 441 G Street NW, Room 7125,  
Washington, DC 20548

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Chuck Young, Managing Director, [youngc1@gao.gov](mailto:youngc1@gao.gov), (202) 512-4800  
U.S. Government Accountability Office, 441 G Street NW, Room 7149  
Washington, DC 20548

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## Strategic Planning and External Liaison

James-Christian Blockwood, Managing Director, [spel@gao.gov](mailto:spel@gao.gov), (202) 512-4707  
U.S. Government Accountability Office, 441 G Street NW, Room 7814,  
Washington, DC 20548



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