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AVIATION SECURITY TECHNOLOGY

TSA Lacks Outcome-oriented Performance Measures and Data to Help Reach Objectives to Diversify its Marketplace

A Century of Non-Partisan Fact-Based Work

GAO-21-146

GAO@100
Highlights

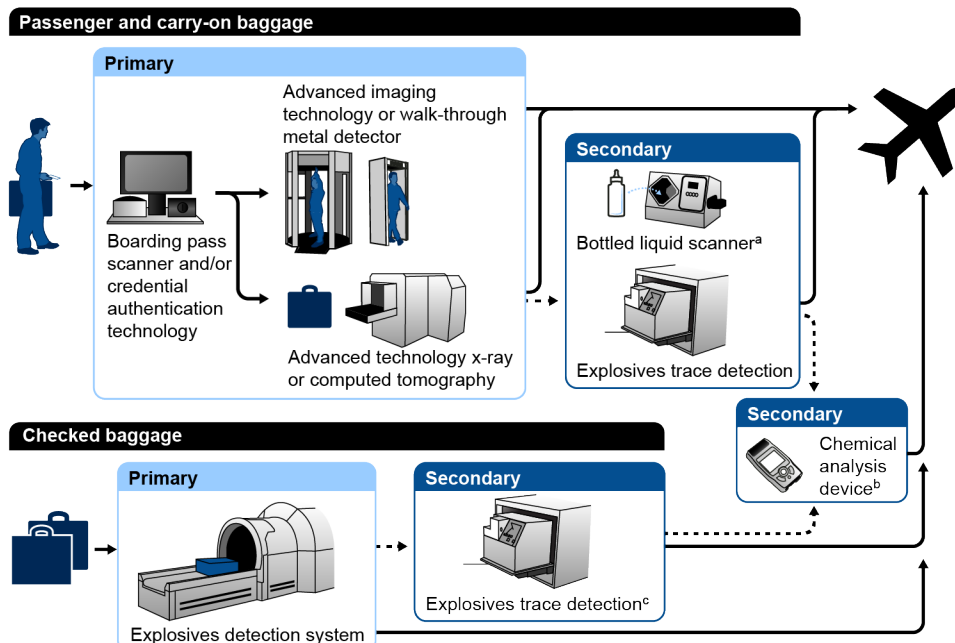Highlights of GAO-21-146, a report to congressional committees

AVIATION SECURITY TECHNOLOGY

TSA Lacks Outcome-oriented Performance Measures and Data to Help Reach Objectives to Diversify its Marketplace

Why GAO Did This Study

With the ongoing threat of terrorism, TSA is looking to innovative technologies to improve security. In response to the Act, TSA developed a strategy to promote innovation and increase small business participation in its security technology marketplace.

The Act includes a provision for GAO to review this strategy. This report examines, among other things, (1) the extent to which TSA's strategy includes the statutory requirements of the Act and compares to common practices of federal agencies to increase small business participation and (2) the extent to which TSA has performance measures and data to assess the effectiveness of its initiatives.

GAO compared TSA's strategy to statutory requirements and practices of comparable federal agencies; interviewed TSA and federal officials from five selected agencies responsible for small and disadvantaged business programs, and a nongeneralizable set of small businesses selected to provide various perspectives on participating in TSA's acquisition processes; and analyzed data from the Federal Procurement Data System–Next Generation.

What GAO Recommends

GAO is making two recommendations, including that TSA (1) develop outcome-oriented performance measures and (2) collect data, where appropriate, on small businesses' progress across TSA's acquisition phases.

DHS concurred with our recommendations.

View GAO-21-146. For more information, contact Triana McNeil at (202) 512-8777 or McNeilT@gao.gov

What GAO Found

The Transportation Security Administration's (TSA) January 2020 *TSA Efforts to Diversify Security Technology* (strategy) addresses the requirements of the 2018 TSA Modernization Act (the Act) and outlines 12 strategic initiatives to increase small business participation in its marketplace. Moreover, the strategy's initiatives are generally consistent with common practices cited by comparable federal agencies, including vendor outreach and linking small businesses together with bigger contractors.

TSA has not developed outcome-oriented performance measures, such as baseline goals or target timeframes to assess the effectiveness of the initiatives in its strategy. While TSA collects some output metrics on its initiatives, leading practices note that outcome-based measures can help track progress in meeting goals. TSA also has not collected data on small businesses' progress across its acquisition phases, such as capturing the overall time, costs, and ability to meet security requirements. Federal standards call for the use of quality information to achieve objectives. Small businesses GAO met with told us they continue to face challenges entering TSA's marketplace—such as navigating it's testing and evaluation process and identifying security requirements—despite TSA's efforts to address them through ongoing and planned initiatives. Developing outcome-oriented performance measures and collecting data, will better position TSA to assess the effectiveness of its initiatives to diversify its security technology marketplace.

Examples of Transportation Security Administration (TSA) Security-Related Technologies

Source: GAO analysis of TSA information. | GAO-21-146

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United States Government Accountability Office

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U.S. GOVERNMENT ACCOUNTABILITY OFFICE
A Century of Non-Partisan Fact-Based Work

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

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Congressional Committees

The Transportation Security Administration (TSA)—a component of the Department of Homeland Security (DHS)—relies on security-related technologies, such as explosives detection systems, to screen approximately 2.8 million passengers, 1.4 million checked bags, and 5.1 million carry-on bags every day. With the ongoing threat of terrorism—including longstanding attempts to target passenger aircraft through use of conventional and homemade explosives—TSA is looking to innovative technologies to improve security. In January 2019, we reported that TSA obligated about $1.4 billion for screening technologies and associated services, such as maintenance and engineering support over three and a half years.[1] TSA also has sought to increase small business participation in its technology marketplace. In fiscal year 2020, TSA obligated more than $1.8 billion in contract awards, of which, nearly $521 million was awarded to small businesses.[2] However, small business contract dollars stayed at about the same levels from fiscal year 2014 to 2019 due in part to barriers, such as the time and expenses required to participate in TSA's multi-year test and evaluation process.

The 2018 TSA Modernization Act (the Act) requires TSA to develop a strategy to promote a diverse security technology marketplace upon which the Administrator can rely to acquire advanced transportation

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[1]Our analysis of federal data on TSA contract obligations from December 2014 through July 2018 found approximately $1.4 billion in obligations for acquisitions of security related technologies and related services. GAO, *Transportation Security Acquisition Reform Act: TSA Generally Addressed Requirements, but Could Improve Reporting on Security-Related Technology*, GAO-19-96 (Washington, D.C.: Jan. 17, 2019).

[2]TSA's obligations for contract awards to small businesses increased by almost $80 million from fiscal year 2019 to fiscal year 2020, due, in part, to increased spending on personal protective equipment to protect the TSA workforce and airline travelers against the spread of COVID-19.

security technologies or capabilities.[3] The Act specifies eight reporting elements that the strategy must include to describe how existing processes impact the Administrator's ability to acquire innovative security technologies; actions TSA will take to foster diversification of the marketplace and assist small business innovators; and include a feasibility assessment for partnering with non-profit organizations. On January 13, 2020, TSA submitted its *TSA Efforts to Diversify Security Technology* report to congressional committees (referred to as TSA's "strategy"), which outlines initiatives to increase small business participation in its marketplace.[4] The Act includes a provision, among others, for us to review TSA's strategy and assess the extent to which it addresses the Act's requirements.

This report addresses: (1) the extent to which TSA's strategy includes the requirements of the Act and compares to common practices other federal agencies use to increase small business participation; (2) the extent to which TSA has performance measures and data to assess the initiatives' effectiveness; and (3) how TSA's initiatives align with related agency-wide strategic goals.

To address our first objective, we analyzed TSA's strategy and determined whether each of the eight required reporting elements were included.[5] We identified that legal provisions and the risk assessment component of internal controls that were significant to this objective, along with the underlying principles that management should define objectives clearly to enable the identification of risks and define risk tolerances. We assessed TSA's efforts outlined in its strategy to determine whether they aligned with the Act's requirements. Specifically, two analysts independently reviewed the strategy and conducted an initial analysis,

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[3]FAA Reauthorization Act of 2018, Pub. L. No. 115-254, § 1913(a), 132 Stat. 3186, 3554 (2018). The Transportation Security Acquisition Reform Act defines security-related technology as any technology that assists TSA in the prevention of, or defense against, threats to U.S. transportation systems, including threats to people, property, and information. See 6 U.S.C. § 561(4). In 2019, in response to a GAO recommendation to clarify and document what constitutes a security-related technology, TSA updated its definition of security-related technology to clarify that the technology needs to be public facing or interacting with the public and further clarifies that it includes engineering services. See GAO-19-96.

[4]TSA, *TSA Efforts to Diversify Security Technology: Report to Congress* (January 13, 2020).

[5]The Act identified eight reporting elements—specific actions requested of the TSA Administrator—to foster diversification within the marketplace, develop plans to assist small businesses, and determine projected implementation timelines, among others.

and a third analyst adjudicated any differences in the analysts' assessments. An attorney independently reviewed and discussed the analysts' final assessments to reach a conclusion.

To examine how TSA's strategy compares to common practices other federal agencies use to increase small business participation, we analyzed annual reports to Congress submitted by the Small Business Procurement Advisory Council highlighting successful practices. Specifically, we analyzed successful practices captured in these congressional reports and categorized them into 12 practices that we found were common among the agencies, which were independently reviewed by two analysts. To determine how these practices aligned with TSA's initiatives, we assessed whether elements of the 12 common practices were included in TSA's strategy to diversify its marketplace. We also analyzed TSA's small business contracting goals report to Congress.[6] In addition, we interviewed officials from the Small Business Administration (SBA) to better understand key practices employed by federal agencies to increase small business participation in federal contracts.

We also identified five federal agencies that have comparable security missions as TSA—the Department of Homeland Security, the Department of Defense, the Department of Justice, the Department of State, and the Department of Transportation—and have awarded contracts or contract dollars to small businesses, including small disadvantaged businesses, women-owned small businesses, service-disabled veteran-owned small businesses, and businesses located in Historically Underutilized Business Zones (HUBZone).[7] We interviewed officials from each agency's Office of Small and Disadvantaged Business Utilization to obtain information on common practices used to increase small business participation.[8] We also interviewed officials from the Federal Office of Small and Disadvantaged Business Utilization Directors Interagency Council to

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[6]TSA, *Small Business Contracting Goals Report: Fiscal Year 2019 Report to Congress* (Arlington, VA: March 25, 2020).

[7]We confirmed that these agencies had contract actions with small businesses using fiscal year 2018 data from the Federal Procurement Data System–Next Generation. We determined that the data were reliable for the purposes of identifying these actions.

[8]TSA is a component of DHS. We interviewed DHS officials to obtain information on practices used at the Department level.

better understand key practices agencies use to increase small business participation in federal contracts.

To address our second objective, we reviewed TSA documents describing information collected to assess its efforts to increase small business participation and enhance marketplace diversification, such as contract award data and output metrics from TSA-led industry events. We interviewed TSA acquisitions and contracting officials from four offices identified in its strategy—Strategy, Policy Coordination, and Innovation; Requirements and Capabilities Analysis; Acquisition Program Management; and Contracting and Procurement. We also reviewed relevant statutes and guidance for federal agencies' establishment of performance goals, metrics and evaluation of progress, such as the Government Performance and Results Act (GPRA) Modernization Act of 2010 and *Standards for Internal Control in the Federal* Government.[9] We determined that the risk assessment, information and communication, and monitoring components of internal controls were significant to this objective, along with the underlying principles that management should define objectives clearly to enable the identification of risks and define risk tolerances, use quality information to achieve the entity's objectives, and establish and operate monitoring activities. Specifically, we reviewed TSA's strategy to identify areas in which it described its efforts to assess TSA's progress in implementing the initiatives outlined in its strategy and their effectiveness in increasing small business participation.

We compared the areas in which TSA described efforts to assess program effectiveness to federal internal control standards and our prior work on best practices for implementation of strategies and initiatives. Specifically, we compared TSA's efforts to past work that identifies practices federal agencies can employ to facilitate effective strategic, data-driven performance reviews.[10] We interviewed officials from small businesses that manufacture security related technologies to determine

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[9]GPRA Modernization Act of 2010, Pub. L. No. 111-352, 124 Stat. 3866 (2011) codified at 31 U.S.C. § 1115 *et seq* and GAO-14-704G. We applied Principles 6, 13, and 16—Define Objectives and Risk Tolerances, Use Quality Information, and Perform Monitoring Activities—within federal internal control standards. As such, controls state that management should define objectives clearly to enable the identification of risks and define risk tolerances, use quality information to achieve its objectives, and establish and operate monitoring activities.

[10]GAO, *Managing for Results: Practices for Effective Agency Strategic Reviews*, GAO-15-602 (Washington, D.C.: July 2015) and *Managing for Results: Data-Driven Performance Reviews Show Promise but Agencies Should Explore How to Involve Other Relevant Agencies*, GAO-13-228 (Washington, D.C.: February 2013).

how and to what extent TSA's initiatives have affected their participation in the security technology marketplace. Since the strategy was not publically available, in part because it was a TSA report sent to Congress, small businesses we met with shared perspectives on experiences applying for and being awarded a TSA contract, as well as challenges they faced in entering TSA's marketplace, among others. We selected a non-generalizable sample of eight out of 92 small businesses based on three factors: (1) businesses awarded TSA contracts and those who applied but were not awarded, (2) businesses that have grown from small to large businesses during fiscal years 2015 through 2019, and (3) businesses that have participated in TSA's industry outreach efforts.[11] The statements and perspectives obtained from these small businesses cannot be generalized to all small businesses, but, when coupled with the other sources of evidence we collected, they provide useful insight into the experiences of small businesses interested in participating in the security technology marketplace. We also interviewed officials from four relevant aviation industry associations and security technology industry associations—Airports Council International-North America, Airlines for America, Government Technology and Services Coalition, and Security Industry Association—to obtain additional perspectives on TSA's efforts to increase small business participation.

To address our third objective, we analyzed other TSA strategy documents, including the *TSA Administrator's Intent and TSA Strategy 2018-2026*, among others, to better understand agency-wide strategic goals aimed at increasing innovation and collaborating with industry partners.[12] Additionally, we reviewed TSA information outlining the status of its initiatives to increase small business participation and described how they aligned with agency-wide strategic efforts. We also interviewed officials from the Office of Strategy, Policy Coordination, and Innovation,

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[11]We identified a non-generalizable sample of 10 small businesses, of which eight agreed to meet with us. The 92 small businesses from which we selected the interviewees was comprised of the 31 reflected in the security-related technology awardee list as of April 2020, 48 that attended ITF industry days from fiscal year 2019, and 13 undergoing Transportation Security Laboratory testing and evaluation process as of May 2020. The three sources are not mutually exclusive, as some businesses may appear in more than one of these lists.

[12]TSA strategic planning documents—*TSA Administrator's Intent and TSA Strategy 2018-2026*—identifies priorities, goals, and objectives to advance the agency's overall mission. See TSA, *Administrator's Intent 2.0*, (Arlington, VA: June 1, 2020) and *TSA Strategy 2018-2026*, (Arlington, VA: 2018).

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TSA's Chief Innovation Officer, and officials familiar with the agency's strategic planning efforts.

To provide contextual information about contracts awarded by TSA, we analyzed data on TSA's security-related technology acquisitions for fiscal years 2015 through 2020 from the Federal Procurement Data System– Next Generation (FPDS-NG) to describe: the number and types of businesses competing for security-related technology contracts (e.g., women-owned and small disadvantaged businesses); the number and dollar value of awarded security-related technology contracts; and the percentage of total contracts awarded to small businesses and other socioeconomic subcategories. To assess the reliability of these data, we reviewed related documentation, interviewed officials knowledgeable about how the data were entered and maintained, and conducted electronic testing for missing data, outliers, or errors. We determined the data to be sufficiently reliable to describe TSA's small business spending from fiscal years 2015 through 2020.

We conducted this performance audit from January 2020 to January 2021 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

TSA is responsible for implementing and overseeing security operations at roughly 440 commercial airports as part of its mission to protect the nation's civil aviation system.[13]

Screening Technologies

TSA is responsible for screening all passengers, their carry-on bags, and their checked baggage to detect and deter prohibited items, such as explosives and contraband, from entering the sterile areas of airports and onto aircraft.[14] TSA uses a variety of security-related technologies— screening systems, as well as software and hardware for those systems—to carry out its mission. TSA's technology profile includes approximately 15,000 deployed systems as of January 2020. Figure 1

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[13]See generally Pub. L. No. 107-71, 115 Stat. 597 (2001); 49 U.S.C. § 114(d)-(e).

[14]See 49 U.S.C. §§ 114(e), 44901. The sterile area of the airport is the area that provides passengers access to boarding aircraft and is an area to which access is generally controlled through the screening of persons and property. See 49 C.F.R. § 1540.5.

depicts the various screening technologies used for passenger and baggage screening, including:

- *Advanced Imaging Technology*—screens passengers for metallic and nonmetallic threats;

- *Explosives Trace Detection*—detects various types of commercial and military explosives through chemical analysis on passengers and their property; and

- *Explosives Detection System*—provides imaging, screening, and detection capabilities to identify possible threats in checked baggage contents.

Figure 1: Transportation Security Administration (TSA) Screening Technologies Used at Passenger and Baggage Screening
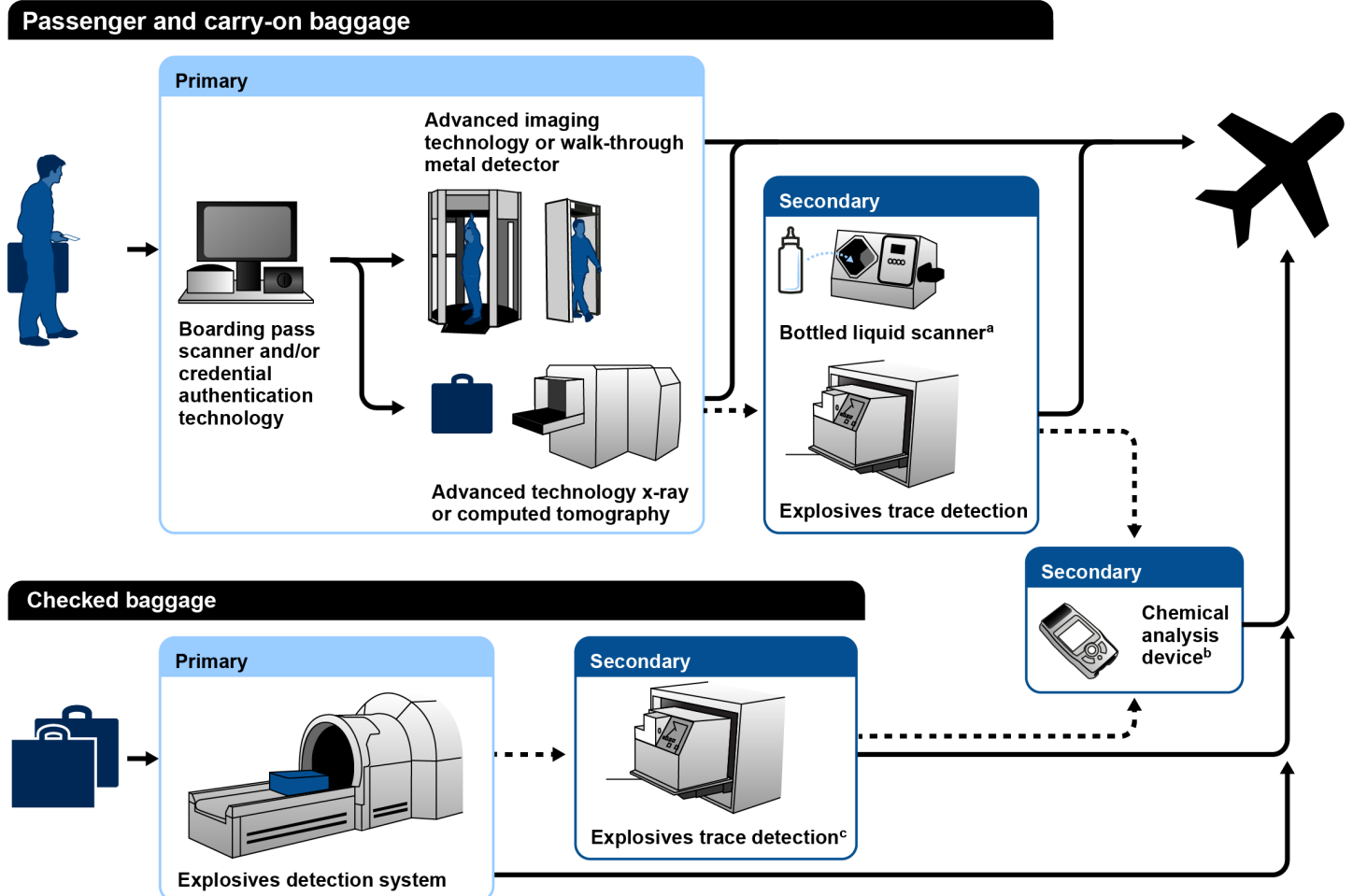
Source: GAO analysis of TSA information. | GAO-21-146

Notes: Primary screening technologies screen all passengers and their baggage. Secondary screening technologies may be used if a passenger or baggage is selected for additional screening.

[a]Bottled liquid scanners are located at secondary screening, but, according to TSA officials, may be used for either primary or secondary screening of liquids.

[b]The chemical analysis device is used by TSA explosives specialists to resolve alarms for passenger, carry-on, and checked baggage screening.

[c]At certain TSA-regulated airports explosives trace detection is the primary technology for screening checked baggage.

TSA Acquisition Lifecycle Phases

TSA follows DHS's policies and procedures for managing its acquisition programs, including for acquisition management, test and evaluation, and resource allocation of its security related technologies. TSA's acquisition programs and policies are primarily set forth in DHS Acquisition Management Directive 102-01 (DHS's acquisition directive) and DHS Instruction Manual 102-01-001, Acquisition Management Instruction/Guidebook.[15] These policies outline an acquisition lifecycle that includes a series of predetermined milestones—known as acquisition decision events—at which DHS acquisition officials review a program to assess whether it is ready to proceed to the next phase of the acquisition lifecycle. All businesses, including small businesses, would engage with TSA through the testing and evaluation process, which falls under the "Obtain" phase of the lifecycle process. Figure 2 below describes TSA's acquisition lifecycle process across five phases.

Figure 2: Phases of Transportation Security Administration (TSA) Acquisition Lifecycle Process

Pre-Need	Need	Analyze / Select	Obtain	Produce / Deploy / Support
TSA identifies and prioritizes capability gaps and needs.	TSA validates the need for a new technology acquisition and defines the problem.	Program manager reviews the alternative approaches to meeting the need, and recommends a best option to the decision authority.	Program manager develops, tests, and evaluates the selected option.	TSA pursues production and deploys the new technology to airports, and provides for its maintenance until retirement.

Small business engages with TSA

Source: GAO analysis of TSA information. | GAO-21-146

[15]TSA's acquisition programs are generally subject to the Federal Acquisition Regulation, which establishes uniform acquisition policies and procedures for executive agencies, as well as the DHS Acquisition Regulation, which supplements the Federal Acquisition Regulation through additional acquisition policies and procedures for the Department. See 48 C.F.R. §§ 1.101, 3001.101.

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TSA Test and Evaluation Process

Under the Obtain phase of TSA's acquisition lifecycle process—the test and evaluation process (known as the qualification process)—is to ensure that a product works as intended before it is obtained by TSA and provided to end users, such as TSA's transportation security officers. According to DHS policy, the testing and evaluation process is to provide timely, accurate information to decision makers and other stakeholders to reduce performance risk. TSA's test and evaluation process is guided by DHS and TSA policies.[16] According to TSA acquisition policy, testing and evaluation is essential to ensure TSA is buying a mature, effective, and suitable system prior to making a significant investment.[17] All businesses, including small businesses, engage TSA's test and evaluation process across three phases[18]:

1. **Certification testing** – Certification is a preliminary step in TSA's qualification process. Certification testing is the verification and validation of a system's performance to provide confidence that the system will satisfy desired capabilities in an operational environment. DHS Science and Technology Directorate's Transportation Security Laboratory conducts certification testing on a small business's initial submission of its proposed screening technology to determine whether it meets TSA's detection requirements (e.g., the rate at which it must accurately detect each category of explosive it is designed to detect and the rate of false alarms, among other things).

2. **Qualification testing** – TSA Systems Integration Facility administers qualification testing to test system performance against additional requirements, such as safety and reliability, availability, and maintainability. TSA also conducts field testing to ensure readiness for operational test and evaluation.

3. **Operational testing** – TSA deploys units to selected airports to conduct operational testing. Operational testing allows TSA to evaluate and certify a system is effective, suitable, and cyber secure and meets all operational requirements in a realistic environment.

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[16]DHS Acquisition Management Directive 102-01, *TSA Strategy to Diversify the Security Technology Marketplace*, *TSA Administrator Intent 2.0.*

[17]TSA, TSA Acquisition Qualification Policy, Version 1.0. (Dec. 14, 2017).

[18]The Transportation Security Laboratory, within the DHS Science and Technology Directorate, is a federal laboratory designed for applied research and test and evaluation of various security technologies, including explosive detection and imaging equipment. The TSA Systems Integration Facility is a testing facility dedicated to the testing and evaluation of TSA security equipment and processes.

Figure 3 below shows a notional depiction of the phases of TSA's test and evaluation process, including the "Obtain" phase where small businesses would enter TSA's lifecycle process.

Figure 3: Example of Small Businesses Undergoing Transportation Security Administration's (TSA) Test and Evaluation Process under the Obtain Phase of its Acquisition Lifecycle Process

Small business enters TSA process

(Obtain phase)

Small business submits proposed screening technology to TSA for test and evaluation

Certification testing

Verifies a system meets detection requirements, including explosive detection rates and the rate of false alarms

Qualification testing

Verifies a system's performance against requirements, including safety and reliability, availability, and maintainability

Operational testing

Certifies a system is effective, suitable, and cyber secure and meets all operational requirements when operated in a realistic environment
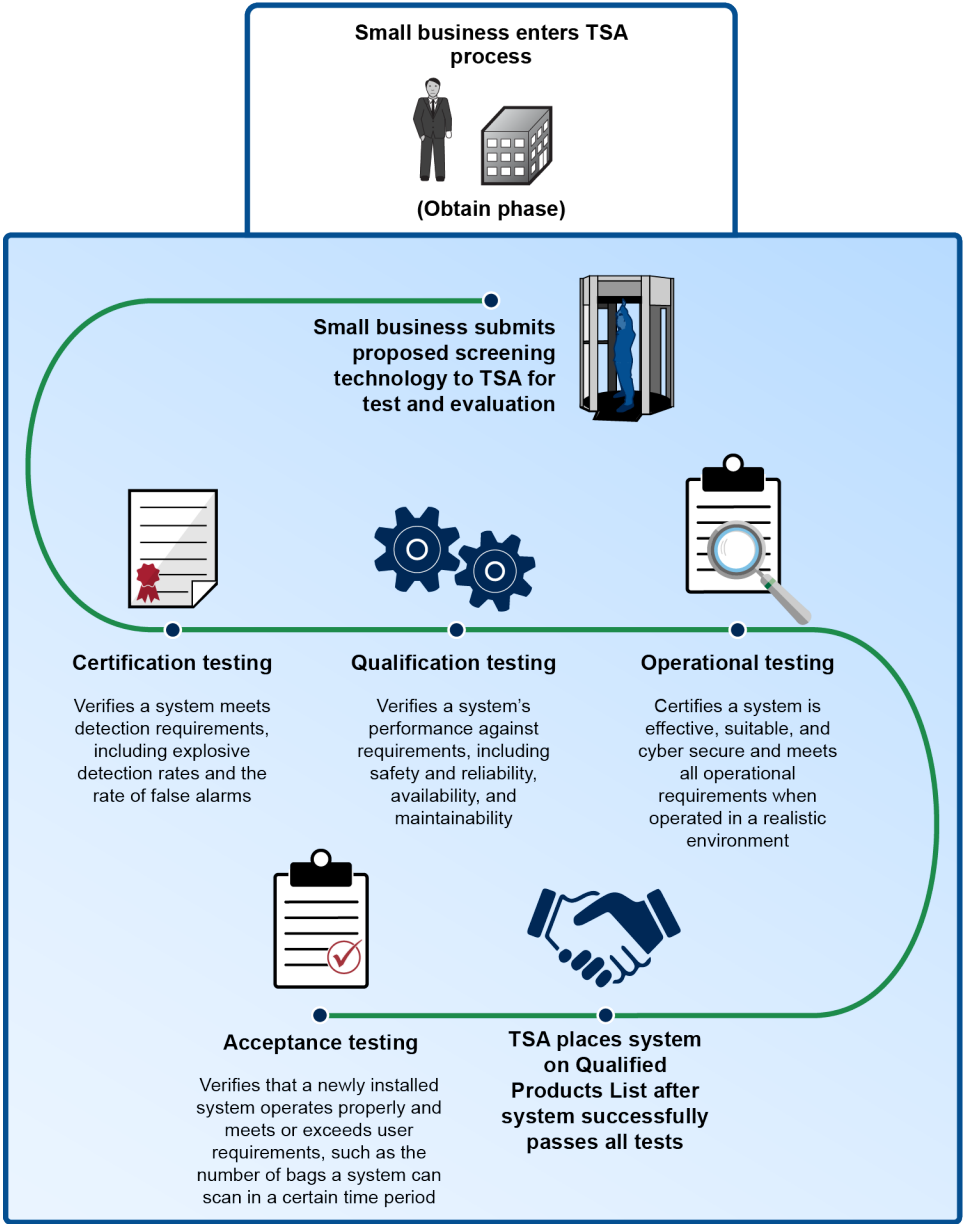
Acceptance testing

Verifies that a newly installed system operates properly and meets or exceeds user requirements, such as the number of bags a system can scan in a certain time period

TSA places system on Qualified Products List after system successfully passes all tests

Source: GAO analysis of TSA policy and guidance. | GAO-21-146

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Following operational testing, TSA prepares an evaluation report. DHS reviews the report and prepares a letter of assessment to conclude whether the system is operationally suitable and effective for procurement. TSA places approved systems on qualified products lists, which contain systems that successfully complete the test and evaluation process and are approved by DHS. Once a system is on a qualified products list, the small business can participate in TSA's procurement process. However, placement on a qualified products list does not guarantee that the vendor will receive a procurement contract.

TSA Offices Responsible for Implementing TSA's January 2020 Strategy

TSA identified four program offices responsible for implementing its January 2020 strategy for diversifying its security technology marketplace and managing its acquisition of security technologies.

- **Strategy, Policy Coordination, and Innovation (SP&I)** leads and coordinates enterprise-wide innovation efforts and works with TSA leadership and program offices to identify promising new ideas and processes.

- **Requirements and Capabilities Analysis (RCA)** serves as TSA's lead business authority for identifying capability needs and user requirements and develops requirements to support existing and future acquisition programs.

- **Acquisition Program Management (APM)** manages all active TSA acquisition programs—including testing and evaluation—and coordinates industry outreach for program maintenance, testing, and other acquisition-related needs.

- **Contracting and Procurement (C&P)** manages TSA procurement strategy and execution of contracting activity to ensure agency competition and small business goals are met.

Figure 4 describes how TSA program offices align across its acquisition lifecycle process.

Figure 4: Alignment of Four Transportation Security Administration (TSA) Program Offices Across its Acquisition Lifecycle Process
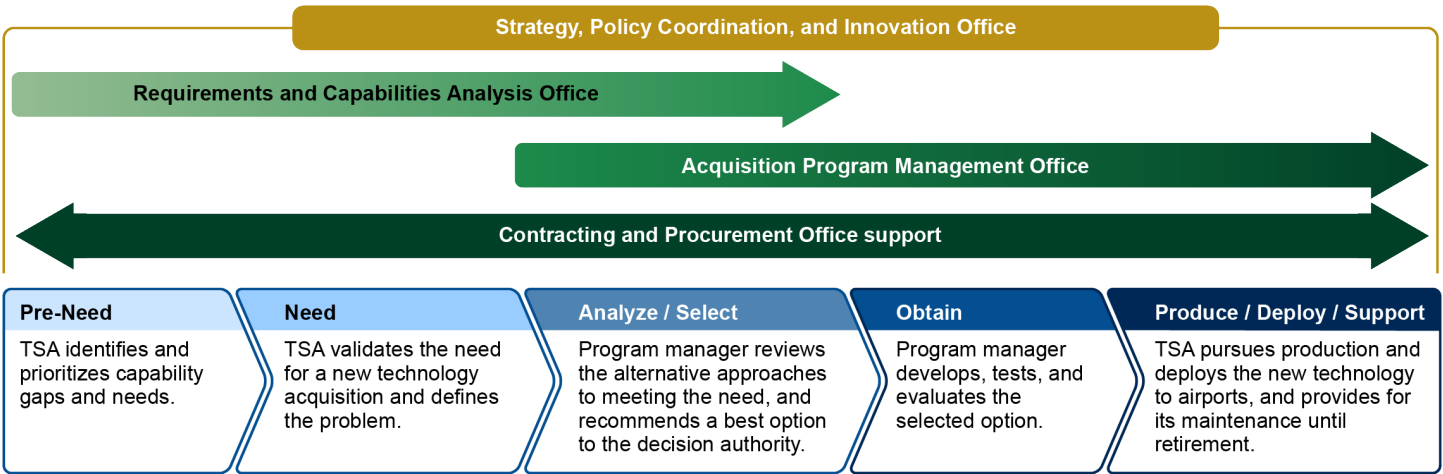
Source: GAO analysis of TSA information. | GAO-21-146

Federal Small and Disadvantaged Business Contracting Goals

In fiscal year 2020, TSA obligated more than $1.8 billion in contract awards, of which, nearly $521 million (or nearly 29 percent) was awarded to small businesses. To help small businesses access contracting opportunities across the federal government, federal law requires that the federal government allocate at least 23 percent of its contracted spending to small businesses.[19] In turn, according to the SBA, small businesses are to provide the federal government with quality, performance, innovation, agility, and competitive pricing which are a key source of job creation.

Each fiscal year, SBA produces a Small Business Procurement Scorecard (scorecard) to monitor government-wide performance in meeting small business contracting goals and to provide accurate and transparent information through the public reporting of small business procurement data. SBA negotiates small business contracting goals with each federal agency with procurement authority such that, in the aggregate, the federal government meets its overall 23-percent goal for contracting dollars awarded to small businesses. In addition to an overall

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[19]Federal requirements for specific procurement goals were first set for federal contracting for small businesses in 1988. (Pub. L. No. 100-656, § 502, 102 Stat. 3853,3881–originally set at 20 percent). Since then, the specific goals were increased in 1997 (Pub. L. No. 105-135, Sec. 603, 111 Stat. 2592, 2632) to the current 23 percent of prime contracting (direct federal awards to contractors) and were extended to firms participating in various small business programs. (15 U.S.C.§ 644(g)).

goal, statutory contracting goals for various socioeconomic subcategories of small businesses are also established in federal law. These small business subcategories are small disadvantaged businesses, women-owned small businesses, service-disabled veteran-owned small businesses, and businesses located in HUBZones.[20] Federal agencies, in turn, work with their components to develop component-level goals for contracted spending to small businesses. For example, figure 5 shows TSA's total obligations for small businesses within the selected subcategories in SBA's scorecard for fiscal years 2015 through 2020.

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[20]SBA defines a small disadvantaged business generally as a firm that is 51 percent or more unconditionally owned and controlled by one or more socially and economically disadvantaged persons. The disadvantaged person or persons must be both socially and economically disadvantaged, and the firm must be considered small according to SBA's size standards. For a complete definition see 13 C.F.R. § 124.1002(b). SBA's HUBZone program helps small businesses located in designated urban and rural communities gain preferential access to federal procurement opportunities.

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Figure 5: Transportation Security Administration (TSA) Obligations for Selected Small Business Subcategories, Fiscal Years 2015 through 2020 in Fiscal Year 2020 Dollars
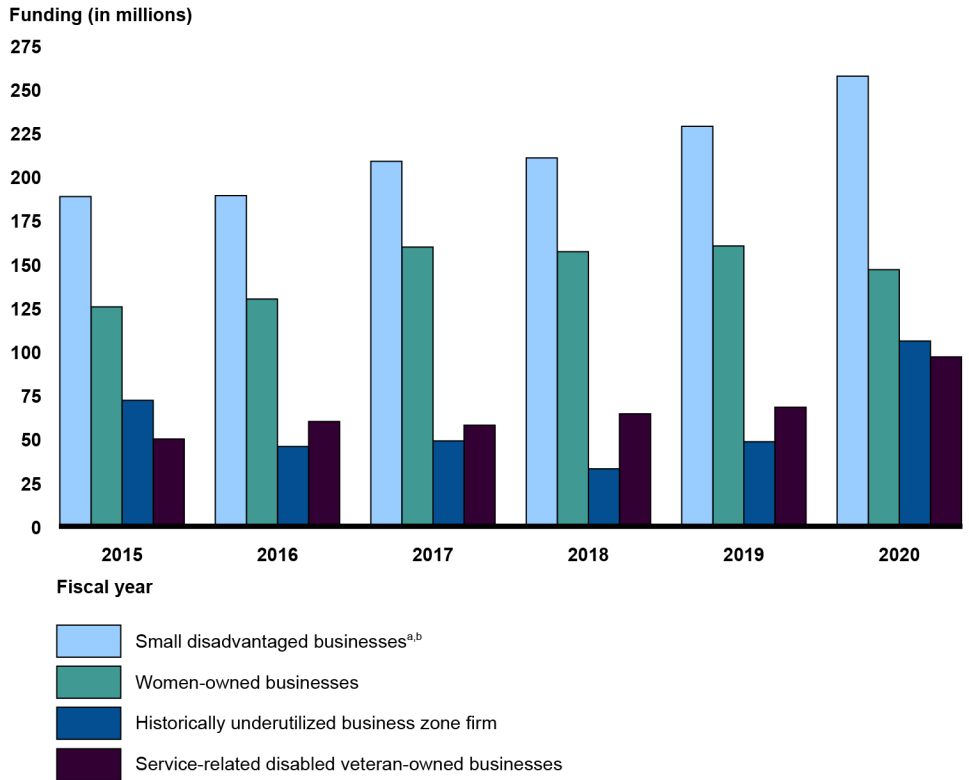
Source: GAO analysis of Federal Procurement Data System – Next Generation. | GAO-21-146

[a]The small business obligations represent selected small business subcategories as reported in the Small Business Association Procurement Scorecard: small disadvantaged businesses, women-owned small businesses, service-disabled veteran-owned small businesses, and businesses located in Historically Underutilized Business Zones (HUBZone).

[b]Small business categories are not mutually exclusive and businesses may be included in multiple categories. Minority-owned small businesses are captured within the small disadvantaged businesses category. Other small businesses may not fall into any of the subcategories shown here.

Figure 6 shows the number of businesses to which TSA awarded contracts for all businesses—including small businesses by subcategories.

Figure 6: Total Number of Businesses to Which the Transportation Security Administration (TSA) Awarded Contracts, Including Small Businesses by Subcategories for Fiscal Years 2015 through 2020
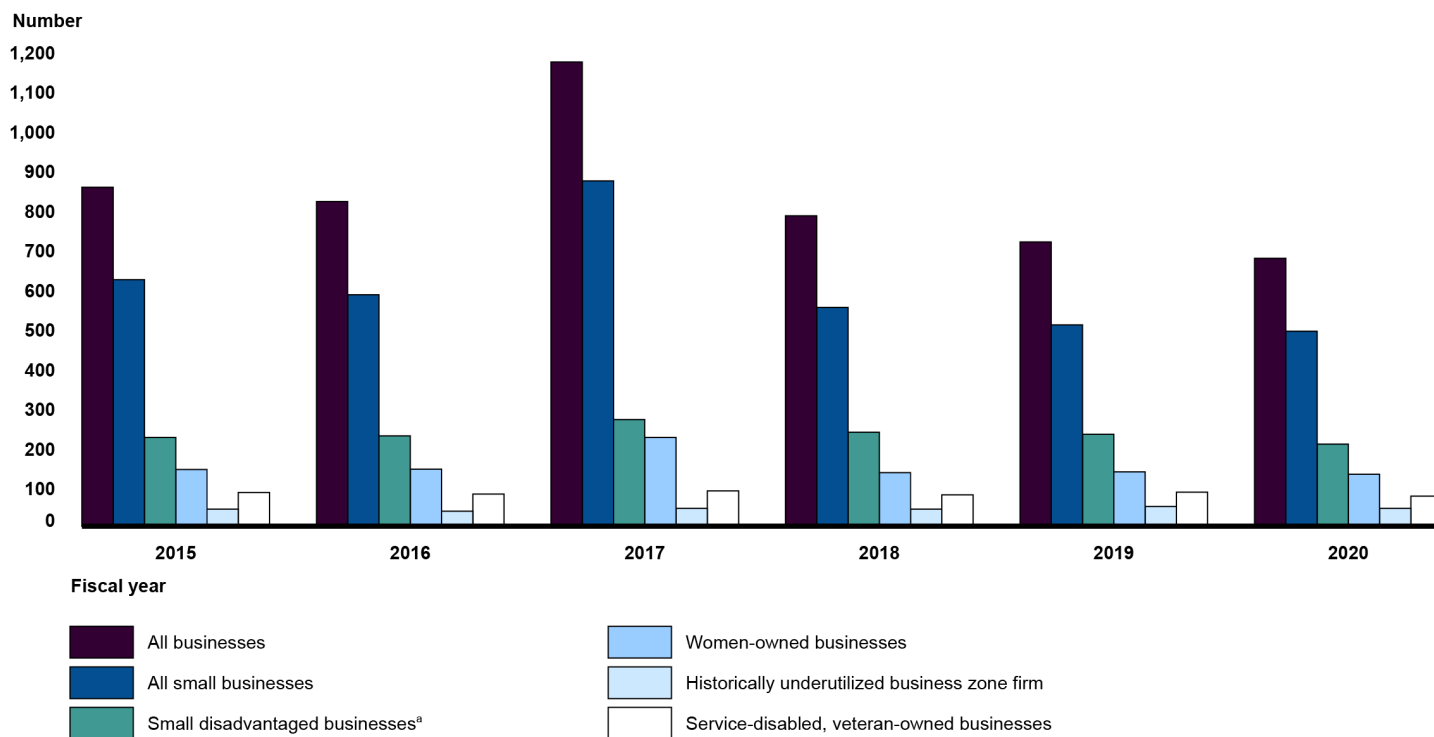
Source: GAO analysis of Federal Procurement Data Systems – Next Generation. | GAO-21-146

[a]Small business categories are not mutually exclusive and businesses may be included in multiple categories. Minority-owned small businesses are captured within the small disadvantaged businesses category.

Office of Small and Disadvantaged Business Utilization

In 1978, the Small Business Act required that all federal agencies with procurement powers establish an Office of Small and Disadvantaged Business Utilization (referred to as Small and Disadvantaged Business Office).[21] These offices are to advocate for small businesses in procurement and contracting processes, and thus work with agencies to

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[21]15 U.S.C. § 644(k). The provisions regarding OSDBUs have been amended multiple times throughout the years, including in the National Defense Authorization Act for Fiscal Year 2013 (Pub. L. No. 112-239, § 1691, 126 Stat. 1632, 2087 (2013)); the National Defense Authorization Act for Fiscal Year 2016 (Pub. L. No. 114-92, § 870, 129 Stat. 726, 938 (2015)); and the National Defense Authorization Act for Fiscal Year 2017 (Pub. L. No. 114-328, §§ 1812, 1813, 1821, 130 Stat. 2000, 2652, 2654 (2016)).

achieve contracting goals.[22] Small and Disadvantaged Business Offices have multiple functions and duties established in the Small Business Act, as amended.[23] In addition to their agency responsibilities, Small and Disadvantaged Businesses Office directors serve with the SBA administrator or a designee on the Small Business Procurement Advisory Council (referred to as Small Business Council), established in 1994.[24] The Small Business Council's duties include submitting an annual report to the Committee on Small Business of the House of Representatives and the Committee on Small Business and Entrepreneurship of the Senate that includes best practices for maximizing small business utilization in federal contracting and conducting peer reviews of each Small and Disadvantaged Business.

TSA's Strategy to Diversify Its Security Technology Marketplace Includes Statutory Requirements and is Generally Consistent with Other Federal Agencies' Practices

TSA's Strategy Includes the Requirements of the 2018 TSA Modernization Act

Our analysis indicates that TSA's January 2020 strategy to diversify its security technology marketplace addresses the requirements in the 2018 TSA Modernization Act (see Table 1).

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[22]Other officials within each agency are also responsible for helping small businesses participate in federal procurement. For example, the heads of procurement departments (sometimes with a title of senior procurement executive) are responsible for implementing the small business programs at their agencies, including achieving program goals.

[23]15 U.S.C. § 644 (k).

[24]The SBPAC was established by Section 7104(b) of the Federal Acquisition Streamlining Act of 1994 (15 U.S.C. §644 note).The council's membership also includes the director of the Minority Business Development Agency, which is part of the Department of Commerce.

Table 1: Alignment of Transportation Security Administration's (TSA) Efforts to Diversify its Security Technology Marketplace with Requirements in the 2018 TSA Modernization Act

Section of the 2018 TSA Modernization Act	Statutory Requirement to be Included in TSA's Strategy	Efforts Described in TSA's January 2020 Strategy	Extent Requirement is Included in the Strategy
6 U.S.C. § 563f(a)	The TSA Administrator is to develop and submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Homeland Security of the House of Representatives a strategy to promote a diverse security technology industry marketplace upon which the Administrator can rely to acquire advance transportation security technologies or capabilities, including by increased participating of small business innovators.	TSA's January 2020 strategy describes the agency's approach to diversify its security technology portfolio and how TSA plans to increase participation of small business innovators.	Included
6 U.S.C. § 563f(b)(1)	Information on how existing TSA solicitation, testing, evaluation, piloting, acquisition, and procurement processes impact the Administrator's ability to acquire from the security technology industry marketplace, including small business innovators that have not previously provided technology to TSA, innovative technologies or capabilities with the potential to enhance transportation security.	Strategy describes five barriers to diversification across the acquisition lifecycle that impact the Administrator's ability to acquire from its security technology marketplace, including small business innovators.	Included
6 U.S.C. § 563f(b)(2)	Specific actions that the Administrator will take, including modifications to the processes described in § 1617(b)(1), to foster diversification within the security technology industry marketplace.	Strategy outlines plans to address five barriers to diversification by implementing 12 initiatives across its acquisition lifecycle.	Included
6 U.S.C. § 563f(b)(3)	Projected timelines for implementing the actions described in § 1617(b)(2).	Strategy identifies activities and milestones for a 4-year phased approach.	Included
6 U.S.C. § 563f(b)(4)	Plans for how the Administrator could, to the extent practicable, assist a small business innovator periodically during such processes, including when such an innovator lacks adequate resources to participate in such processes, to facilitate an advanced transportation security technology or capability being developed and acquired by the Administrator.	Strategy describes its efforts to address resource constraints small businesses encounter during the procurement process—including resource sources such as the Small Business Innovation Research Program, U.S. Department of State Global Innovation through Science and Technology Initiative, and Global Scouting and Investor Relationships, among others.	Included

Section of the 2018 TSA Modernization Act	Statutory Requirement to be Included in TSA's Strategy	Efforts Described in TSA's January 2020 Strategy	Extent Requirement is Included in the Strategy
6 U.S.C. § 563f (b)(5)	An assessment of the feasibility of partnering with an organization described in § 501(c)(3) of the Internal Revenue Code of 1986 (the Code) and exempt from tax under § 501(a) of the Code to provide venture capital to businesses, particularly small business innovators, for commercialization of innovative transportation security technologies that are expected to be ready for commercialization in the near term and within 36 months.	Strategy describes its process for conducting a feasibility assessment of establishing a non-profit venture capital partnership to provide capital to business, particularly small business innovators, and enhancing the partnership with the Department of Homeland Security's (DHS) Science and Technology Directorate.	Included
6 U.S.C. § 563f(c)(1)	In conducting the feasibility assessment under § 1617(b)(5), the Administrator shall consider the following: Establishing an organization described in § 501(c)(3) of the Code and exempt from tax under § 501(a) of the Code as a venture capital partnership between the private sector and the intelligence community to help businesses, particularly small business innovators, commercialize innovative security-related technologies.	Strategy describes the extent to which it is feasible for the agency to establish a non-profit organization as a venture capital partnership, and concluded that doing so is not advisable, in part because TSA already leverages DHS's existing 501(c)(3) partnership and new partnerships would require additional resources the agency currently lacks.	Included
6 U.S.C. § 563f(c)(2)	Enhance engagement through DHS's Science and Technology Directorate.	Strategy describes plans to further engage with DHS's Science and Technology Directorate to develop strategies to support the successful transfer of solutions to TSA.	Included

Source: GAO analysis of TSA Efforts to Diversify Security Technology: Report to Congress and the 2018 TSA Modernization Act. | GAO-21-146

In particular, the Act calls for TSA to provide information about the ability of small businesses to enter TSA's marketplace, among other things. In response, TSA included in its strategy five barriers that small businesses face in entering its technology security marketplace, which can ultimately contribute to small businesses' lack of success in obtaining federal contracts. These barriers include:

Identifying security requirements and capability gaps. TSA has historically shared limited information regarding the prioritization and resulting impacts on requirements with industry, making it difficult for small businesses to adapt to changing requirements.

Systems architecture. TSA's current security equipment is highly complex and proprietary with little data, image or interface

standardization. As such, TSA relies solely on the equipment manufacturers and existing contracting mechanisms for software, hardware, or firmware upgrades, or entirely new components (e.g., credential authentication technology) for operational improvements, limiting opportunities for small businesses.

Test and evaluation process. Traditionally, the testing, evaluation, and acquisition process takes time and requires a sizable upfront capital investment for vendors.

Acquisition and procurement strategies. Policies promoting fair and open competition may not allow for consideration of factors that may affect small businesses' ability to compete, such as not having significant work experience with the federal government.

Resources available to small business innovators. The typical federal procurement and acquisition process can be an extremely expensive endeavor for small business concerns that have not previously worked with federal agencies. As a result, small businesses can find themselves at a disadvantage as they may not have the resources to go through the entire procurement process.

Officials we interviewed from small businesses agreed with the barriers that TSA identified in its strategy, and shared the following concerns relevant to some of them:

Identifying security requirements and capability gaps. Officials from a small business we interviewed expressed concerns about TSA's ability to provide a clear roadmap of security technology requirements. Specifically, they stated that one of the biggest challenges of engaging with TSA is the lack of a clear, 5-year plan that outlines future technology needs. According to TSA, in response to the Transportation Security Acquisition Reform Act of 2014, the agency produced a 5-year technology investment plan that outlines its future procurement needs.[25] In the plan, TSA states that it will provide updates regarding its technology investment efforts to stakeholders, including small businesses at industry events and conferences. While TSA has developed its plan, small business owners we interviewed acknowledged that TSA could do a better job informing

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[25]TSA, *Strategic Five-Year Technology Investment Plan Biennial Refresh: 2017 Report to Congress* (December 19, 2017).

small businesses in a timely manner of plans to improve existing technologies or develop new ones.

Another small business official we interviewed expressed similar concerns and recognized that TSA could improve on defining its security requirements up front and providing a realistic plan on how the agency plans to acquire those security technologies. They added that small businesses could benefit from TSA better identifying security requirements and key performance indicators, communicating them, and providing opportunities for feedback.

Test and evaluation process. One small business official stated that completing TSA's testing and evaluation process is difficult because of its lengthy timeframes and required upfront capital costs. Specifically, this small business reported that the overall certification and deployment process—from testing the technology to actually seeing it in an airport—could take between 3 to 6 years. Additionally, small businesses experience challenges competing with large, more established companies due to millions of dollars associated with service and maintenance costs. This small business owner added that they cannot readily produce security technologies for TSA given the funding challenges and multi-year certification process.

Acquisition and procurement strategies. A small business official we interviewed reported that promoting TSA's set aside program is challenging because it's rare to have two businesses competing for a single contract, especially given the time and budget constraints.[26]

To mitigate these barriers, TSA implemented or planned 12 initiatives to diversify its security technology marketplace and increase small business participation.[27] According to TSA acquisition officials, some initiatives have been ongoing since 2013, well before the strategy was issued, some were initiated within the past year, and two have been planned but not yet implemented. According to TSA officials, all of the initiatives

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[26]According to the Small Business Administration, contracting officials can use set-aside contracts to help their agencies meet their small business contracting goals. For example, if there are at least two small businesses that could do the work for a fair price, the contract should be set aside exclusively for small businesses to compete for. If there are fewer than two, an agency may be authorized to create a sole-source contract, or otherwise offer it for full and open competition.

[27]TSA, *TSA Efforts to Diversify Security Technology: Report to Congress* (January 13, 2020).

outlined in the strategy, except two, are ongoing as of November 2020. TSA officials stated that the last two initiatives, scheduled to be implemented in 2021, are designed to provide industry partners additional tools to enhance innovation. Figure 7 shows how TSA's initiatives align with each barrier and their status.

Figure 7. Transportation Security Administration (TSA) Initiatives to Address Five Barriers to a Diverse Security Technology Marketplace, Status as of November 2020

IDENTIFY REQUIREMENT AND CAPABILITY GAPS

TSA strategic initiative	Description
Initiative 1: Transportation Security Capability Analysis Process (TSCAP) Expansion *Status: Ongoing since 2013*	TSA's Transportation Security Capability Analysis Process (TSCAP) is designed to help leadership identify the best course of action to close capability gaps and inform TSA's budget process. TSA plans to prioritize capability gaps across three main factors: risk mitigation trade space, strategic alignment, and network effects.
Initiative 2: Aviation Security Architecture *Status: Ongoing since 2017*	TSA's Aviation Security Architecture approach is designed to provide an integrated view of the capabilities, security threats, technology requirements, and solutions to develop aviation countermeasures.
Initiative 3: Performance Management *Status: Ongoing since 2017*	TSA plans to enhance its performance management system to remotely monitor output data—number of items screened and number of alarms, among others—to improve security effectiveness and operational efficiency.
Initiative 4: Enhanced Collaboration with Industry and Partners *Status: Ongoing since 2019*	TSA continues enhancing collaboration and increasing industry's awareness of TSA's needs, which may shorten the time to develop and deploy advanced security technology. Industry partners are uniquely placed to act as the eyes and ears of TSA, creating a global network reaching into the small business community and elevating world class solutions to the Agency's attention.
Initiative 5: Promote Market Diversification and Expansion *Status: Ongoing since 2019*	TSA's Innovation Task Force (ITF) plans to: leverage ITF's Industry Exchange Toolkit, expand Customer Relationship Management tools, continue its industry exchange activities (such as ITF Annual Industry Day), pursue academic partnerships, and broaden the breadth of funding possibilities, among others.

SYSTEMS ARCHITECTURE

Initiative 6: Develop and Acquire Modular, Open Architecture Systems *Status: Ongoing since 2020*	TSA plans to continue to invest in the implementation of a standard data and image format for Advanced Imaging Technology and Computed Tomography, systems invest in hardware interface standards, and continue collaborating with national laboratories to support the development of an open architecture system. Open architecture systems aims to improve data sharing and interoperability of systems.

Source: GAO analysis of *TSA Efforts to Diversify Security Technology: Report to Congress* and TSA updated responses as of November 2020. | GAO-21-146

TEST AND EVALUATION/ACQUISITION PROCESS AFFORDABILITY

TSA strategic initiative	Description
Initiative 7: Leverage Public Private Partnerships: Expanding the Use of the Third-Party Test Process *Status: Ongoing since 2013*	TSA has developed a third-party test process to gain efficiencies and save costs in its acquisition testing and evaluation process. TSA will also work with international partners to obtain testing and evaluation reciprocity and to exchange information.

LIMITED ACQUISITION STRATEGIES FOR INNOVATIVE/EMERGING TECHNOLOGIES

Initiative 8: Commercial Solutions Opening Pilot (CSOP) *Status: Ongoing since 2017*	TSA's pilot program provides contracting officers additional procedural discretion and flexibility so that commercial item acquisitions may be solicited, offered, evaluated, and awarded in a simplified manner. Competitive selection occurs when the award is a result of a general solicitation and the peer review of proposals.
Initiative 9: Set Asides *Status : Ongoing*	TSA has determined the small business set aside and partial small business set aside strategy is a viable approach to support its diversification efforts for the security technology portfolio.

RESOURCES AVAILABLE TO SMALL BUSINESS INNOVATORS

Initiative 10: Public Private Partnerships – Small Business Innovation Research (SBIR) Program *Status: Ongoing since 2020*	TSA is exploring ways to increase its engagement and use of the DHS Small Business Innovation Research (SBIR) program.
Initiative 11: Public-Private Partnerships – U.S. Department of State, Global Innovation through Science and Technology (GIST) *Status : Not implemented (expected in 2021)*	TSA will explore public-private partnerships as another channel to support small business innovators. One model comes from the U.S. Department of State's GIST Initiative. This partnership brings together U.S. entities in the private sector, non-profit space, academia, and government to engage international entrepreneurs through trainings, online programs, pitch competitions, and mentorship.
Initiative 12: Global Scouting and Investor Relationships *Status : Not implemented (expected in 2021)*	TSA's global scouting campaign builds and leverages new relationships with vertical chain technology partners including leading venture capital, accelerators and innovation labs. TSA's outreach program is specifically designed to also raise awareness within the investor community of market size and demands, providing greater confidence to the venture capital and investor community of TSA needs.

Source: GAO analysis of *TSA Efforts to Diversify Security Technology: Report to Congress* and TSA updated responses as of November 2020. | GAO-21-146
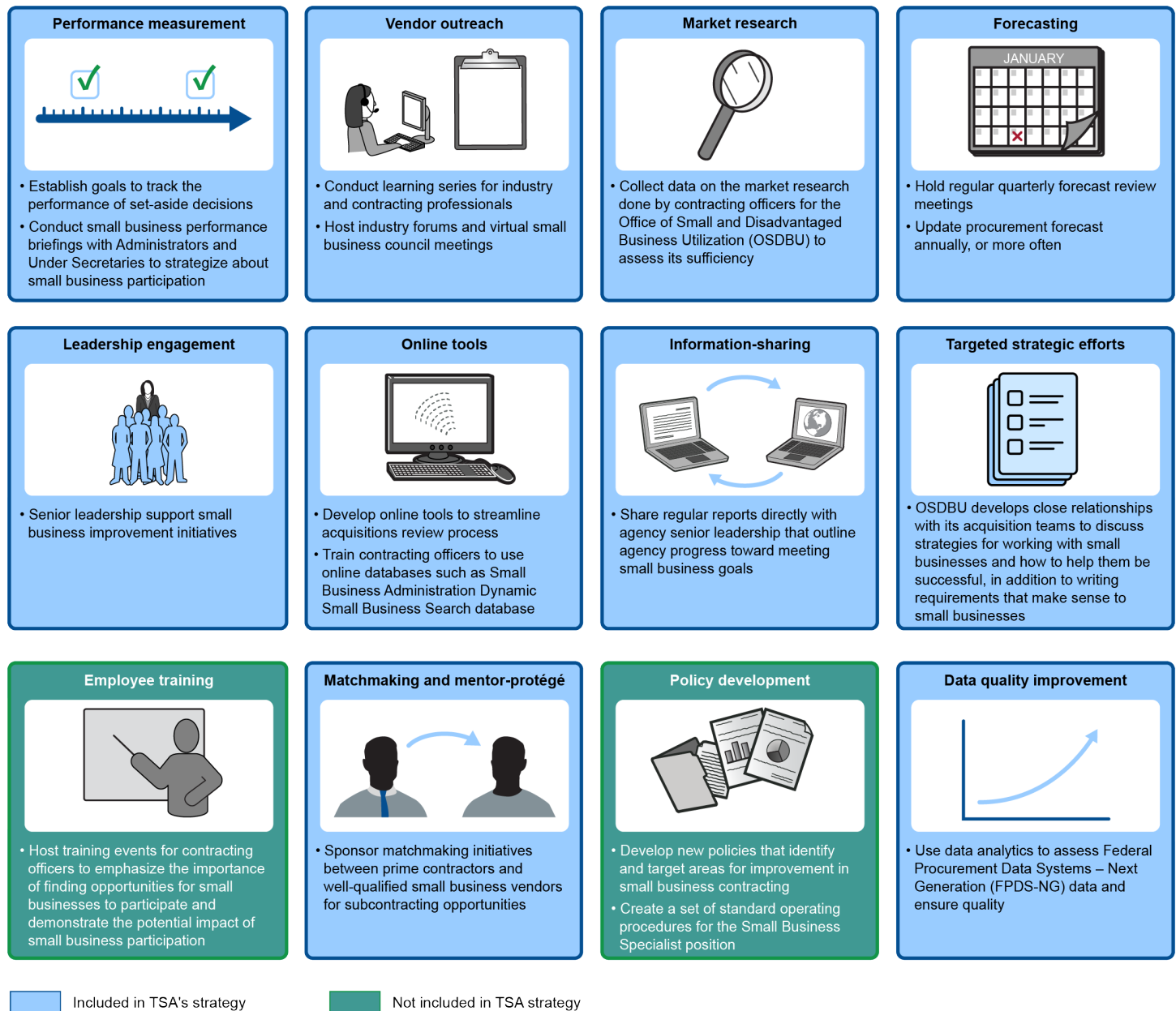
Small business officials we interviewed did not comment on the progress TSA has made on each of these initiatives, in part because the strategy was not publically available.

Initiatives Outlined in TSA's Strategy Are Generally Consistent with Other Federal Agencies' Practices

Our analysis of TSA's strategy indicates that TSA's ongoing and planned initiatives to diversify its marketplace are generally consistent with efforts other federal agencies reported using to increase small business participation. Our analysis of the Small Business Procurement Advisory Council (the Council) annual reports to Congress identified 12 common types of practices federal agencies use to address small business participation.[28] They include a range of common practices which are generally consistent with TSA's initiatives. Figure 8 shows the most commonly-cited categories of practices reported by the Council and federal agencies we interviewed.

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[28]Small Business Administration, *Small Business Procurement Advisory Council (SBPAC) Report to Congress Fiscal Year 2018*, (Washington, D.C.: September 20, 2019); *Small Business Procurement Advisory Council (SBPAC) Report to Congress Fiscal Year 2017*, (Washington, D.C.: February 5, 2018); and *Small Business Procurement Advisory Council (SBPAC) Report to Congress Fiscal Year 2016*, (Washington, D.C.: July 17, 2017).

Figure 8: Transportation Security Administration (TSA) Initiatives Are Generally Consistent with 12 Common Practices Used by Federal Agencies to Increase Small Business Participation

Performance measurement

- Establish goals to track the performance of set-aside decisions
- Conduct small business performance briefings with Administrators and Under Secretaries to strategize about small business participation

Vendor outreach

- Conduct learning series for industry and contracting professionals
- Host industry forums and virtual small business council meetings

Market research

- Collect data on the market research done by contracting officers for the Office of Small and Disadvantaged Business Utilization (OSDBU) to assess its sufficiency

Forecasting

- Hold regular quarterly forecast review meetings
- Update procurement forecast annually, or more often

Leadership engagement

- Senior leadership support small business improvement initiatives

Online tools

- Develop online tools to streamline acquisitions review process
- Train contracting officers to use online databases such as Small Business Administration Dynamic Small Business Search database

Information-sharing

- Share regular reports directly with agency senior leadership that outline agency progress toward meeting small business goals

Targeted strategic efforts

- OSDBU develops close relationships with its acquisition teams to discuss strategies for working with small businesses and how to help them be successful, in addition to writing requirements that make sense to small businesses

Employee training

- Host training events for contracting officers to emphasize the importance of finding opportunities for small businesses to participate and demonstrate the potential impact of small business participation

Matchmaking and mentor-protégé

- Sponsor matchmaking initiatives between prime contractors and well-qualified small business vendors for subcontracting opportunities

Policy development

- Develop new policies that identify and target areas for improvement in small business contracting
- Create a set of standard operating procedures for the Small Business Specialist position

Data quality improvement

- Use data analytics to assess Federal Procurement Data Systems – Next Generation (FPDS-NG) data and ensure quality

☐ Included in TSA's strategy ☐ Not included in TSA strategy

Source: GAO analysis of Small Business Procurement Advisory Council (SBPAC) reports to Congress and interviews with officials from the Office of Small and Disadvantaged Business Utilization (OSDBU) Interagency Council, Departments of Defense, Homeland Security, Justice, State, and Transportation, and the Small Business Administration. | GAO-21-146

We found that TSA's initiatives outlined in its strategy align with 10 of the 12 common types of practices reported by Council—including leadership engagement, vendor outreach, sponsoring mentor-protégé programs, and targeted strategic efforts, among others. Two commonly-cited practices included in the Council's reports to Congress—employee training and policy development—were not specifically included in TSA's strategy. Examples of TSA initiatives that align with common practices include:

- *Initiative 1: Transportation Security Capability Analysis* Process aligns with the common practice of leadership engagement as this initiative focuses on expanding the use of its analysis process to help leadership identify the best course of action and better inform TSA's budget process for procurement needs.

- *Initiative 6: Develop and Acquire Modular, Open Architecture Systems* aligns with the common practice of targeted strategic efforts to expand opportunities for small businesses to participate in their markets. This initiative aims to invest in the implementation of a standard data and image format for its security hardware. According to TSA officials, it has struggled historically with companies that produce equipment that rely on proprietary software; with this initiative, TSA will require security equipment to be "open" to accept any software that meets the standard data and image format. As a result, according to TSA officials, it will be easier for smaller companies to produce and provide TSA with best-in-breed software for such equipment.
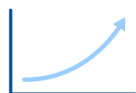
Two initiatives align with the common practices of small business vendor outreach and sponsoring a similar mentor-protégé program.

- *Initiative 12: Global Scouting Campaign* aims to build new relationships by reaching out to entities such as innovation labs to establish collaborative partnerships.[29] According to TSA, this effort also raises awareness within the investor community of market size and demands.

- *Initiative 11: Public-Private Partnerships* aims to emulate a Department of State effort that brings together entities in the private sector, non-profits, academia, and government for trainings, online programs, pitch competitions, and mentorship.

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[29]Innovation labs are semi-autonomous organizations that engage diverse participants, on a long-term basis, in open collaboration for the purpose of creating, elaborating, and prototyping radical solutions to pre-identified systemic challenges.

Figure 9 details each of TSA's 12 initiatives to diversify its marketplace, as outlined in the strategy, and how they align with other federal agencies' practices.

Figure 9. Transportation Security Administration (TSA) Strategic Initiatives to Diversify its Security Technology Marketplace and Related Federal Agencies Practices, as of November 2020
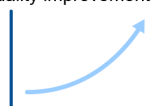
Identify Requirement and Capability Gaps

TSA strategic initiative	Description	Alignment with federal agencies' practices
Initiative 1: Transportation Security Capability Analysis Process (TSCAP) Expansion *Status: Ongoing since 2013*	TSA's Transportation Security Capability Analysis Process (TSCAP) is designed to help leadership identify the best course of action to close capability gaps and inform TSA's budget process. TSA plans to prioritize capability gaps across three main factors: risk mitigation trade space, strategic alignment, and network effects.	Leadership engagement; forecasting
Initiative 2: Aviation Security Architecture *Status: Ongoing since 2017*	TSA's Aviation Security Architecture approach is designed to provide an integrated view of the capabilities, security threats, technology requirements, and solutions to develop aviation countermeasures.	Data quality improvement
Initiative 3: Performance Management *Status: Ongoing since 2017*	TSA plans to enhance its performance management system to remotely monitor output data—number of items screened and number of alarms, among others—to improve security effectiveness and operational efficiency.	Performance measurement; data quality improvement
Initiative 4: Enhanced Collaboration with Industry and Partners *Status: Ongoing since 2019*	TSA continues enhancing collaboration and increasing industry's awareness of TSA's needs, which may shorten the time to develop and deploy advanced security technology. Industry partners are uniquely placed to act as the eyes and ears of TSA, creating a global network reaching into the small business community and elevating world class solutions to the Agency's attention.	Vendor outreach; targeted strategic efforts; matchmaking and mentor-protégé
Initiative 5: Promote Market Diversification and Expansion *Status: Ongoing since 2019*	TSA's Innovation Task Force (ITF) plans to: leverage ITF's Industry Exchange Toolkit, expand Customer Relationship Management tools, continue its industry exchange activities (such as ITF Annual Industry Day), pursue academic partnerships, and broaden the breadth of funding possibilities, among others.	Vendor outreach; online tools; market research

Systems Architecture

TSA strategic initiative	Description	Alignment with federal agencies' practices
Initiative 6: Develop and Acquire Modular, Open Architecture Systems *Status: Ongoing since 2020*	TSA plans to continue to invest in the implementation of a standard data and image format for Advanced Imaging Technology and Computed Tomography, systems invest in hardware interface standards, and continue collaborating with national laboratories to support the development of an open systems architecture.	Data quality improvement; targeted strategic efforts

Source: GAO analysis of TSA documentation and Small Business Procurement Advisory Council (SBPAC) reports to Congress. | GAO-21-146

Test and Evaluation/Acquisition Process Affordability

TSA strategic initiative	Description	Alignment with federal agencies efforts
Initiative 7: Leverage Public Private Partnerships: Expanding the Use of the Third-Party Test Process *Status: Ongoing since 2013*	TSA has developed a third-party test process to gain efficiencies and save costs in its acquisition testing and evaluation process. TSA will also work with international partners to obtain testing and evaluation reciprocity and to exchange information.	Targeted strategic efforts; information-sharing

Limited Acquisition Strategies for Innovative/Emerging Technologies

Initiative 8: Commercial Solutions Opening Pilot (CSOP) *Status: Ongoing since 2017*	TSA's pilot program provides contracting officers additional procedural discretion and flexibility so that commercial item acquisitions may be solicited, offered, evaluated, and awarded in a simplified manner. Competitive selection occurs when the award is a result of a general solicitation and the peer review of proposals.	Data quality improvement
Initiative 9: Set Asides *Status : Ongoing*	TSA has determined the small business set aside and partial small business set aside strategy is a viable approach to support its diversification efforts for the security technology portfolio.	Targeted strategic efforts

Resources Available to Small Business Innovators

Initiative 10: Public Private Partnerships – SBIR Program *Status: Ongoing since 2020*	TSA is exploring ways to increase its engagement and use of the DHS Small Business Innovation Research (SBIR) program.	Vendor outreach
Initiative 11: Public-Private Partnerships – U.S. Department of State, Global Innovation through Science and Technology (GIST) *Status : Not implemented (expected in 2021)*	TSA will explore public-private partnerships as another channel to support small business innovators. One model comes from the U.S. Department of State's GIST Initiative. This partnership brings together U.S. entities in the private sector, non-profit space, academia, and government to engage international entrepreneurs through trainings, online programs, pitch competitions, and mentorship.	Vendor outreach; matchmaking and mentor-protégé
Initiative 12: Global Scouting and Investor Relationships *Status : Not implemented (expected in 2021)*	TSA's global scouting campaign builds and leverages new relationships with vertical chain technology partners including leading venture capital, accelerators and innovation labs. TSA's outreach program is specifically designed to also raise awareness within the investor community of market size and demands, providing greater confidence to the venture capital and investor community of TSA needs.	Vendor outreach; matchmaking and mentor-protégé

Source: GAO analysis of TSA documentation and Small Business Procurement Advisory Council (SBPAC) reports to Congress. | GAO-21-146

TSA Lacks Outcome-oriented Performance Measures and Data to Assess the Effectiveness of Its Initiatives to Diversify Its Security Technology Marketplace

TSA Has Not Established Outcome-oriented Performance Measures to Assess the Effectiveness of Each of Its Initiatives

TSA has identified strategic goals to diversify its security technology marketplace and developed 12 strategic initiatives to increase small business participation, but has not established outcome-oriented performance measures for each of these initiatives to assess their effectiveness.[30] While TSA's strategy includes an implementation plan over a 4-year phased approach—outlining activities, milestones, and some output metrics—the plan does not include clear performance measures to assess progress in increasing opportunities for small business to enter TSA's security technology marketplace.

The GPRA Modernization Act of 2010 establishes that in addition to setting objective, quantifiable, and measurable performance goals, federal agencies should describe how these goals are to be achieved and measure progress.[31] The Office of Management and Budget specifies that performance goals should include clear metrics, targets, and time periods

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[30]OMB refers to performance measures as performance indicators in OMB Circular No. A-11, *Preparation, Submission, and Execution of the Budget* (July 2020). Performance indicators are used to track progress toward a goal or target within a timeframe. For consistency with our prior work, we will use the term "performance measures" throughout this report.

[31]GPRA Modernization Act of 2010, Pub. L. No. 111-352, 124 Stat. 3866 (2011) codified at 31 U.S.C. § 1115 *et seq.* While GPRAMA requirements are applicable to the department or agency level, we have previously reported that they can serve as leading practices at other organizational levels, including the program, project, or activity level. See GAO, *Drug Control: Actions Needed to Ensure Usefulness of Data on Suspicious Opioid Orders*, GAO-20-118 (Washington, D.C.: Jan. 29, 2020).

for achieving them.[32] Outcome-oriented performance measures are used to track progress toward a goal or target within a timeframe. Additionally, our prior work found that performance measurement serves as an early warning system to identify and inform management of operational challenges and as a vehicle for improving accountability.[33] *Standards for Internal Control in the Federal* Government calls for agencies to establish and monitor the internal control systems and evaluate its results.[34] Specifically, federal standards call for agencies to continuously monitor the entity's operation, conduct evaluations, and respond to changes.

TSA has made some progress in identifying output-oriented metrics— such as the number of small businesses that participate in TSA-led events and number of solicitations and awards executed, among others. However, TSA has not fully developed outcome-oriented performance measures that monitor progress in achieving each of its 12 strategic initiatives of diversifying its security technology marketplace over time. For example, TSA reported making progress in some of its initiatives, such as enhancing collaboration with industry partners. Specifically, TSA hosts a day-long event called, "Industry Day" which aims to bring together industry partners and TSA experts to discuss operational challenges and best practices on innovative security operations. At these events, TSA collects output metrics, such as the number of small businesses who participated in these events, number of participants who have never contracted with TSA before, and number of participants who submitted proposals in response to TSA solicitations. While the information collected is helpful for TSA to know characteristics of industry partners attending the event, it does not help determine how collaboration with

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[32]OMB Circular No. A-11 describes outputs as measures that describe the level of product or activity that will be provided over a period of time. Outcomes are measures that indicates progress against achieving the intended result of the program and indicates changes in conditions that the government is trying to influence. OMB encourages agencies to use outcome-oriented measures where feasible and appropriate.

[33]GAO-15-602.

[34]GAO, *Standards for Internal Control in the Federal Government* GAO-14-704G (Washington, D.C.: September 2014).

GAO-21-146 TSA Security Technology Marketplace

these partners results in their technologies being placed on TSA's Qualified Products List.[35]

Additionally, TSA identified two initiatives seeking different approaches for acquiring innovative and emerging technologies—conducting a commercial solutions pilot program and increasing the number of set asides designated for small businesses. As such, TSA collects output metrics, such as the number of solicitations and awards executed for both programs. However, while this information is useful, it does not include baseline goals or target timeframes, which could provide meaningful insights on how effective either approach is in acquiring emerging technologies. Moreover, to address challenges related to its testing and evaluation process, TSA proposed a goal of increasing testing efficiency by expanding the use of third party testing. However, TSA established this goal without evaluating whether additional third party testing is an effective effort to pursue. We recently reported that TSA's goals to increase testing efficiency lacks performance metrics to measure the effectiveness of third party testing.[36]

TSA officials told us that they did not develop outcome-oriented performance measures for each of its initiatives because it was not required in the Act. However, OMB encourages agencies to use outcome-oriented measures where feasible and appropriate. Initiatives such as these, at their inception, would benefit from clear, outcome-oriented performance measures to track and guide progress towards achieving goals. Having clearly defined performance measures better positions TSA to assess the effectiveness of its strategic initiatives to diversify its security marketplace and increase small business participation. By having outcome-oriented performance measures in place, TSA can better target areas most in need of improvement and select appropriate levels of investment. As such, TSA will be better positioned to determine whether its initiatives are achieving its goals or if other initiatives should be considered.

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[35]TSA places approved technologies on qualified products lists, which contain systems that have successfully completed the test and evaluation process and have been approved by DHS. Once a system is on a qualified products list, the vendor can participate in TSA's procurement process. However, placement on a qualified products list does not guarantee that the vendor will receive a procurement contract.

[36]GAO, *TSA Acquisitions: TSA Needs to Establish Metrics and Evaluate Third Party Testing Outcomes for Screening Technologies* GAO-21-50. (Washington, D.C., Oct. 29, 2020).

TSA Has Not Collected Data on Small Businesses' Progress across All Acquisition Phases

TSA has not developed a process to collect data on small businesses' progress across all its acquisition phases to assess if TSA's initiatives are effective. Specifically, TSA does not collect data, such as capturing the overall time, costs, and ability to meet security requirements, on small businesses' progress in moving through this process. As such, TSA does not identify where or when small business experiences challenges along its acquisition process.

Standards for Internal Control in the Federal Government calls for agencies to use quality information to achieve objectives, including obtaining relevant data from reliable sources.[37] Specifically, federal standards call for agencies to ensure that relevant data 1) have a logical connection with the information requirements and 2) are obtained on a timely basis so that they can be used for effective monitoring. Our previous work has also shown that federal agencies benefit from collecting complete, accurate, and consistent data to document performance and support decision-making at various organizational levels.[38]

Specifically, TSA does not track data on businesses that are unsuccessful in achieving placement of their security-related technologies on TSA's Qualified Products List. TSA officials stated that, while it is possible to assemble data on the diversity of its security technology marketplace, it has not been required to do so and it would take time to pull data from internal and external sources because it is not collected in a centralized location. However, doing so would provide TSA with insights on where or when small business experiences challenges along its acquisition process.

Small businesses we interviewed described several challenges they experience in navigating TSA's acquisition phases. Specifically:

- Officials from five small businesses we met with acknowledged TSA's Industry Day events were useful opportunities to share information. However, one noted that there was an expectation that the business was already familiar with TSA's acquisition process and fundamental information on the process was not available.

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[37]GAO-14-704G.

[38]GAO, *Managing For Results: Enhancing Agency Use of Performance Information for Management Decision Making* GAO-05-927 (Washington, D.C. Sep. 9, 2005).

- Officials from two small businesses we interviewed expressed concern regarding TSA's inability to expand its public-private partnership effort through the DHS Small Business Innovation Research program.[39] They stated that small businesses constantly struggle with securing funds to compete with large businesses and that leveraging the Small Business Innovation Research (SBIR) program could alleviate some of the financial burden small businesses face and incentivize innovation.

- Funding was also a concern shared by officials from the DHS Office of Small and Disadvantaged Business Utilization (DHS Small Business Office). DHS officials acknowledged that limited funds are available to assist small businesses competing for federal contracts. According to a senior DHS Small Business Office official, while DHS has developed a mentor-protégé program, it does not have the funding to provide incentives to encourage participation.

According to TSA acquisition officials, it is difficult to identify at which point and the reason why businesses drop out of the acquisition lifecycle. TSA officials reported that not all businesses pass the testing and evaluation process. According to TSA officials, some vendors exit the process once they have received a TSA certification letter—which verifies their technologies meet the agency's detection standards—because it can be easier and faster to sell their technologies to overseas airport security companies. In other cases, businesses that work with TSA may exit the market because they do not have the resources to adhere to changes in security requirements, required re-configurations, and additional testing and evaluation of their technologies. According to TSA officials, some small businesses are also acquired by large businesses while undergoing the acquisition process, which makes it difficult to track when they exit the process. TSA does not track these small businesses because their technologies are not placed on its Qualified Product List and ultimately not awarded a contract.

TSA officials told us that the Act required TSA to develop a strategy, but did not explicitly instruct TSA to collect data regarding small businesses' progress along its acquisition phases. According to its strategy, approximately 51 percent of all technologies fail in qualification testing, which delays the acquisition timeline. A senior TSA acquisition official

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[39]The Department of Homeland Security Small Business Innovation Research (SBIR) Program is designed to encourage small businesses to provide quality research and to develop new processes, products, and technologies to support the U.S. government achieve its homeland security missions.

acknowledged that the agency would benefit from tracking overall metrics of small businesses, as it would help them identify chokepoints in the test and evaluation process. According to the official, TSA does not currently have metrics in place to monitor or track small businesses' progress throughout the process and acknowledged that TSA would be better positioned to offer assistance to small businesses if they were more aware of their specific challenges.

Collecting data, where appropriate, on small businesses' progress across TSA's acquisition phases—such as time, costs, or ability to meet requirements—would better position TSA to determine how, where, and when it can better target its strategic initiatives or if other initiatives should be considered.

TSA Aligned Its Initiatives to Diversify Its Security Related Technology Marketplace with Related Agency-Wide Strategic Goals

As of November 2020, TSA has aligned its strategic initiatives to increase small business participation in the security technology marketplace with related agency-wide strategic goals. According to its strategy, established in late 2018, TSA's Office of Strategy, Policy Coordination, and Innovation (SP&I) works with agency leadership and acquisition program offices—Requirements and Capabilities Analysis, Acquisition Program Management, and Contracting and Procurement—to bring new ideas and innovative processes to TSA that advance security screening operations of passengers, property, and checked baggage.

According to TSA officials, through its Chief Innovation Officer, SP&I is responsible for ensuring that the 12 initiatives described in TSA's strategy align with agency-wide strategic goals—such as promoting security partnerships across surface transportation systems by sharing information and developing best practices and aligning TSA's organizational structure to manage risk and optimize resource allocation, among other efforts. Agency-wide goals are captured in *TSA Administrator's Intent* 2.0, the agency's strategic planning document that outlines agency-wide efforts to align with cross-agency coordination and goal-setting efforts.[40]

During the course of our review, TSA took initial steps to align each of the 12 initiatives with agency-wide strategic goals. For example:

- **Enhanced Collaboration with Industry Partners:** TSA plans to continue enhancing collaboration and increasing industry's awareness

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[40]TSA, *Administrator's Intent 2.0* (Arlington, VA: June 23, 2020).

of TSA's needs, which may shorten the time to develop and deploy advanced security technology. According to TSA, this initiative is in alignment with their agency-wide strategic goal to reduce time-to-field solutions because it aims to streamline the procurement process, which results in improved delivery of mission requirements. TSA noted this will uniquely place industry partners to create partnerships with the small business community to adapt to changing threat environments.

- **Set Asides:** TSA has the statutory authority to promote small business participation, and has determined the small business and partial small business set aside strategy is a viable approach to support its diversification efforts. Creating set asides for small businesses is in accordance with the Small Business Act. TSA negotiates its component goals with DHS to meet its department wide small business goals.

Appendix I includes a description of TSA's 12 strategic initiatives and their alignment to agency-wide strategic goals as defined in the *TSA Administrator's Intent 2.0.*

TSA has taken steps to align its strategic initiatives to agency wide strategic goals. However, it is too soon to tell whether its efforts will increase small business participation in its security technology marketplace. For example, in April 2020, SP&I officials acknowledged that they had not yet fully identified how the strategy's initiatives aligned with agency-wide strategic goals. TSA agreed that alignment of the strategy's initiatives to enterprise goals could better position TSA to monitor their progress over time and determine the effectiveness of its efforts. For example, enhancing collaboration with industry partners is one of the strategy's initiatives which aligns with one of TSA's agency-wide strategic goals—defining clear pathways to enable partnerships and collaboration. According to TSA officials, by aligning these efforts, SP&I can effectively monitor stakeholders' progress and focus on improved outcome measures, such as increasing opportunities for small businesses to engage in TSA's marketplace and secure contract awards. In May 2020, TSA hired a new Chief Innovation Officer, whose tasks among others, was to coordinate and oversee agency-wide innovation efforts. We communicated with the newly hired Chief Innovation Officer and offered our assessment on SP&I's lack of alignment with TSA's strategic initiatives to increase small business participation.

In August 2020, SP&I officials reported that they had taken steps to align four of its 12 strategic initiatives—developing an aviation security

architecture, enhanced collaboration with industry and partners, developing a commercial solutions pilot program, and establishing a global scouting and recruitment program. According to SP&I officials, the newly hired Chief Innovation Officer was still in the process of understanding the agency's overall innovation lifecycle process and working with acquisition offices to support their efforts. In October 2020, TSA confirmed that it had aligned all 12 initiatives in its strategy to strategic goals outlined in the recently issued *TSA Administrator's Intent 2.0* document, an updated version of the original strategic planning document.[41] Of the strategy's initiatives, 11 of the 12 aligned with five agency wide strategic goals—improving decision-making timeframes, reducing the time to field solutions, defining clear pathways for partnership and collaboration, aligning organizational structure to manage risk, and modernizing the transportation vetting process. One initiative aligns with the mandated goals identified in the Small Business Act. This strategic document calls for SP&I to formalize a strategic management process that aligns budgeting and investment decisions with strategy, policy, capabilities, and requirements. SP&I officials acknowledged that the *TSA Administrator's Intent* is a living document that captures requirements currently underway and helps the agency move forward. While TSA has taken steps to ensure its initiatives align with agency wide goals, it is too soon to tell whether its efforts have increased small business participation in TSA's security technology marketplace.

Conclusions

To meet its mission of protecting passengers and commerce traveling to, from, and within the United States, TSA relies on innovative security related technologies to improve its effectiveness and operational efficiency. TSA continues to develop these technologies while seeking ways to increase opportunities for small business to compete in its security technology marketplace. TSA has identified barriers small businesses face when entering the marketplace and outlined strategic initiatives to mitigate these barriers. However, TSA has not established clear, outcome-oriented performance measures to determine the effectiveness of their initiatives. Moreover, TSA has not collected data on small businesses' progress along its acquisition lifecycle process to assess the effectiveness of its initiatives. Developing performance measures and collecting such data could help small businesses find greater success in navigating the security technology marketplace and help TSA reach its small business diversification objectives.

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[41]TSA, *Administrator's Intent* (Arlington, VA: June 1, 2018).

Recommendations for Executive Action
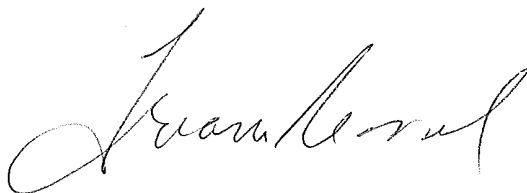
We are making the following two recommendations to TSA:

The TSA Administrator should develop outcome-oriented performance measures to help TSA assess the effectiveness of its strategic initiatives in diversifying its marketplace. (Recommendation 1)

The TSA Administrator should collect data, where appropriate, on small businesses' progress across its acquisition phases to determine how, where, and when it can better target its strategic initiatives or if other initiatives should be considered. (Recommendation 2)

Agency Comments

We provided a draft of this report to DHS, DOD, DOJ, DOT, SBA, and the State Department for review and comment. DOD, DOJ, DOT, SBA, and the State Department told us they had no comments on the draft report. DHS provided written comments, which are reprinted in appendix II, and also provided technical comments, which we incorporated as appropriate. DHS concurred with our recommendations and described actions TSA plans to take to address them. Specifically, TSA plans to develop outcome-oriented performance measures that will be tracked on a quarterly basis. Moreover, TSA plans to collect data and explore new methods to monitor small businesses' progress along the acquisition lifecycle process. These actions, if fully implemented by TSA, should address the intent of our recommendations.

We are sending copies of this report to the appropriate congressional committees, the Secretary of Homeland Security, and the TSA Administrator. In addition, the report is available at no charge on the GAO website at https://www.gao.gov. If you or your staff have any questions about this report, please contact me at (202) 512-8777 or McNeilT@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 significant contributions to this report are listed in appendix III.

Triana McNeil
Director, Homeland Security and Justice

List of Committees

The Honorable Maria Cantwell
Chair
The Honorable Roger F. Wicker
Ranking Member
Committee on Commerce, Science, and Transportation
United States Senate

The Honorable Bennie G. Thompson
Chairman
The Honorable John Katko
Ranking Member
Committee on Homeland Security
House of Representatives

During the course of our review, the Transportation Security Administration (TSA) took initial steps to align each of the 12 strategic initiatives to diversify its security technology marketplace with agency-wide strategic goals. While TSA has taken steps to ensure its initiatives align with agency wide goals, it is too soon to tell whether their efforts have increased small business participation in TSA's security technology marketplace. According to TSA's January 2020 report to Congress, strategic initiatives include enhancing collaboration with industry partners and expanding the use of third-party testing, among others.[1] The following is a description of the 12 initiatives and their alignment to agency-wide strategic goals as defined in the *TSA Administrator's Intent 2.0.*[2]

- **Initiative 1: Expand Transportation Security Capability Analysis Process (TSCAP):** TSCAP is designed to help leadership determine how best to close capability gaps and inform TSA's budget process. According to TSA, expanding this effort is in alignment with its strategic goal to reduce time to field solutions, because both are intended to improve the procurement process by increasing TSA's ability to more readily adapt to changing threat environments.

- **Initiative 2: Aviation Security Architecture**: This approach focuses on mapping threat pathways in commercial domestic passenger aviation to countermeasures. According to TSA, this effort is in alignment with its strategic goal to improve the timeliness in making decisions because it is intended to provide an integrated view of capabilities, threats, and technology requirements. According to TSA officials, they plan to institutionalize a process that enables TSA leadership to make informed decisions in a timely manner and produce a data framework and standards.

- **Initiative 3: Performance Management:** TSA plans to move to a remote system model where performance information—the number of items screened, number of alarms, number of system faults, among others—is captured from the security equipment across the fleet and centralized. According to TSA officials, improving performance management is in alignment with its strategic goal to reduce time to field solutions, because operators can better track performance

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[1]TSA, *TSA Efforts to Diversify Security Technology: Report to Congress* (Arlington, VA: January 13, 2020).

[2]TSA, *TSA Administrator's Intent 2.0* (Arlington, VA: June 23, 2020).

across airports and more readily adapt to changing threat
environments.

- **Initiative 4: Enhanced Collaboration with Industry Partners:** TSA
  plans to continue enhancing collaboration and increasing industry's
  awareness of TSA's needs, which may shorten the time to develop
  and deploy advanced security technology. According to TSA officials,
  this initiative is in alignment with its strategic goal to reduce time to
  field solutions because it aims to streamline the procurement process,
  which results in improved delivery of mission requirements. As such,
  TSA reported that industry partners are uniquely placed to network
  with the small business community and adapt to changing threat
  environments.

- **Initiative 5: Promote Market Diversification and Expansion:** TSA's
  Innovation Task Force (ITF) plans to conduct a range of activities
  designed to promote marketplace diversification and expand small
  business outreach. ITF plans to, among others, leverage its Industry
  Exchange Toolkit, expand Customer Relationship Management tools,
  continue its industry exchange activities, and pursue academic
  partnerships. According to TSA officials, promoting marketplace
  diversification is in alignment with its strategic goals to reduce time to
  field solutions and define clear pathways to enable partnerships. By
  encouraging enhanced collaboration, TSA reported that they will be
  better positioned to adopt and integrate industry best practices that
  support innovation.

- **Initiative 6: Develop and Acquire Modular, Open Architecture
  Systems:** TSA plans to develop a standardization process of its data
  and image format for its screening technologies, Advanced Imaging
  Technology and Computed Tomography. According to TSA, this
  initiative aligns with multiple strategic goals of modernizing its vetting
  and credentialing capabilities, as well as reducing time to field
  solutions. TSA reported that in developing these open architecture
  systems, it will be better positioned to enhance its vetting process and
  more readily adapt to changing threat environments.

- **Initiative 7: Leverage Public Private Partnerships**: Expanding the
  Use of Third-Party Test Process: TSA has developed a third-party test
  process to gain efficiencies and save costs in the acquisition test and
  evaluation. As such, this process allows TSA to review external data
  from a variety of external sources in its evaluation process. According
  to TSA officials, expanding the use of third-party testing aligns with
  multiple strategic goals—reducing the time to field solutions and
  defining clear pathways for collaboration. TSA reported that by

leveraging this process, it expects to decrease cost and time for its
development testing.

- **Initiative 8: Commercial Solutions Opening Pilot (CSOP):** This
  program provides contracting officers additional discretion and
  flexibility so that commercial item acquisitions may be solicited,
  offered, evaluated, and awarded in a simplified manner. As such, this
  simplification process is designed to increase efficiency and reduce
  administrative costs. According to TSA officials, this initiative aligns
  with its strategic goal to reduce the time to field solutions because the
  intended outcome is to streamline its procurement process.

- **Initiative 9: Set Asides:** TSA has the statutory authority to promote
  small business participation and has determined the small business
  set aside and partial small business set aside strategy is a viable
  approach to support its diversification efforts for the security
  technology portfolio. Creating set asides for small businesses is in
  accordance with the Small Business Act. As such, TSA negotiates its
  component goals with DHS to meet its department wide small
  business goals.

- **Initiative 10: Public Private Partnerships - Small Business
  Innovation Research (SBIR):** TSA is exploring ways to increase its
  engagement and use of the DHS Small Business Innovation
  Research (SBIR) program. This program provides competitive
  opportunities for small businesses to engage in federal research and
  development programs. According to TSA officials, promoting SBIR
  aligns with its strategic goals of defining a clear pathway for
  partnership and aligning TSA's organizational structure to manage
  risk and optimize resource allocations. As such, TSA reported that it
  will be better positioned to enhance innovative collaboration amongst
  stakeholders.

- **Initiative 11: Public Private Partnerships - U.S. Department of
  State Global Innovation through Science and Technology (GIST):**
  TSA plans to explore public-private partnerships as another channel
  to support small business innovators. Specifically, one model comes
  from the U.S. Department of State's GIST Initiative, which brings
  together U.S. entities in the private sector and government to engage
  international entrepreneurs through trainings and mentorship.
  According to TSA officials, this initiative is in alignment with its
  strategic goals to define a clear pathway for collaboration and align
  TSA's organizational structure to manage risk and optimize resource
  allocations. TSA reported that by developing this partnership, it will be
  better positioned to adopt and integrate industry practices that
  promote innovative collaboration.

- **Initiative 12: Global Scouting and Investor Relationships:** TSA's global scouting campaign builds and leverages new relationships with venture capital firms and innovation labs. This outreach program is specifically designed to raise awareness within the investor community of, and help small businesses secure private equity funding. According to TSA officials, encouraging investor relationships aligns with its strategic goal of defining a clear pathway for partnership. As such, this effort helps promote innovative collaboration amongst private equity stakeholders.

Appendix II: Comments from the Department of Homeland Security

Homeland
Security

February 12, 2021

Triana McNeil
Director, Homeland Security and Justice
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548

Re: Management Response to Draft Report GAO-21-146, "AVIATION SECURITY
       TECHNOLOGY: TSA Lacks Outcome-oriented Performance Measures and
       Data to Help Reach Objectives to Diversify its Marketplace"

Dear Ms. McNeil:

Thank you for the opportunity to comment on this draft report. The U.S. Department of
Homeland Security (DHS or the Department) appreciates the U.S. Government
Accountability Office's (GAO) work in planning and conducting its review and issuing
this report.

The Department is pleased to note GAO's recognition of the Transportation Security
Administration's (TSA) efforts to diversify the security technology marketplace and
increase small business participation, such as developing 12 initiatives to mitigate
challenges small businesses face in entering the security technology marketplace.
Examples include, but are not limited to, enhancing collaboration with industry partners,
promoting market diversification through industry exchange activities, increasing use and
engagement of the DHS Small Business Innovation Research (SBIR) program, and
planning a global scouting campaign to build and leverage new relationships with vertical
chain technology partners. As reflected in the GAO's draft report, these initiatives are
generally consistent with other federal agencies' efforts and align with related agency-
wide strategic goals. DHS remains committed to working toward enhancing small
business participation in our security technology marketplace.

The draft report contained two recommendations with which the Department concurs.
Attached is our detailed response to each recommendation. DHS previously submitted
technical comments addressing several accuracy and other issues under a separate cover
for GAO's consideration.

Again, thank you for the opportunity to review and comment on this draft report. Please feel free to contact me if you have any questions. We look forward to working with you again.

Sincerely,

JIM H CRUMPACKER
Digitally signed by JIM H CRUMPACKER
Date: 2021.02.12 07:52:53 -05'00'

JIM H. CRUMPACKER, CIA, CFE
Director
Departmental GAO-OIG Liaison Office

Attachment

2

**Attachment: Management Response to Recommendations
Contained in GAO-21-146**

GAO recommended that the TSA Administrator:

Recommendation 1: Develop outcome-oriented performance measures to help TSA
assess the effectiveness of its strategic initiatives in diversifying its marketplace.

Response: Concur. TSA's Office of Strategy, Policy Coordination, and Innovation (SP&I)
will lead TSA's effort to assess the effectiveness of the 12 initiatives to increase small
business participation in the security technology marketplace, and will also develop
outcome-oriented performance measures and methodologies to assess the effectiveness of
diversifying its marketplace, as appropriate. SP&I will track this information for senior
leadership on a quarterly basis using a dashboard or similar method. The results will help
determine further efforts regarding small business participation, such as the use of
potential set-asides. Further, tracking this information will help SP&I better gauge small
business participation throughout the security technology acquisition process.

Estimated Completion Date (ECD): November 30, 2021.

Recommendation 2: Collect data, where appropriate, on small businesses' progress
across its acquisition phases to determine how, where and when it can better target its
strategic initiatives or if other initiatives should be considered.

Response: Concur. SP&I will lead an effort to evaluate existing data collection
measures and methodologies, and to explore new measures and methods to monitor small
businesses' progress in the security technology acquisitions lifecycle. The process will
be ongoing TSA's SP&I evaluates and discovers data resulting from these new collection
methods. The focus will be to leverage this data to understand areas for improvement in
existing initiatives better and identify additional opportunities to establish initiatives for
diversifying the marketplace.

ECD: November 30, 2021.

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Appendix III: GAO Contact and Staff Acknowledgments

GAO Contact	Triana McNeil (202) 512-8777 or McNeilT@gao.gov
Staff Acknowledgments	In addition to the contact named above, Kevin Heinz (Assistant Director), Josh Diosomito (Analyst-in-Charge), Claudia Becker, Colette Alexander, Sarah Williamson, Kisha Clark, Elizabeth Dretsch, David Hooper, Suellen Foth, Kevin Reeves, and Ben Crossley made key contributions to this report.