



December 2019

# HOMELAND SECURITY ACQUISITIONS

## Outcomes Have Improved but Actions Needed to Enhance Oversight of Schedule Goals

Accessible Version

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### Outcomes Have Improved but Actions Needed to Enhance Oversight of Schedule Goals

Highlights of [GAO-20-170SP](#), a report to congressional committees

View [GAO-20-170SP](#). For more information, contact Marie A. Mak at (202) 512-4841 or [makm@gao.gov](mailto:makm@gao.gov).

#### Why GAO Did This Study

Each year, the DHS invests billions of dollars in a diverse portfolio of major acquisition programs to help execute its many critical missions. DHS plans to spend more than \$10 billion on these programs in fiscal year 2020 alone. DHS's acquisition activities are on GAO's High Risk List, in part, because of management and funding issues. The Explanatory Statement accompanying the DHS Appropriations Act, 2015 included a provision for GAO to review DHS's major acquisitions on an ongoing basis.

This report, GAO's fifth review, assesses the extent to which: (1) DHS's major acquisition programs are on track to meet their schedule and cost goals, and (2) current program baselines trace to key acquisition documents.

GAO assessed 27 acquisition programs, including DHS's largest programs that were in the process of obtaining new capabilities as of April 2018, and programs GAO or DHS identified as at risk of poor outcomes. GAO assessed cost and schedule progress against baselines; compared APB cost, schedule and performance parameters to underlying documents used in establishing baselines; and interviewed DHS officials.

#### What GAO Recommends

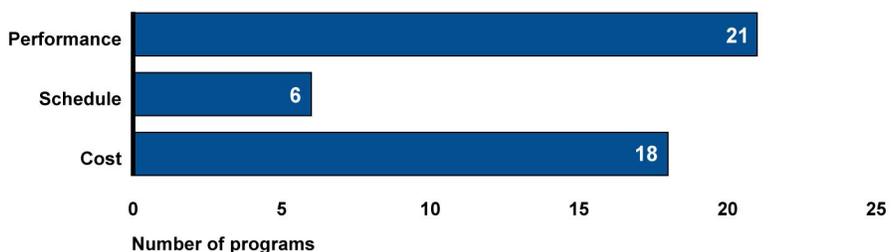
GAO is making two recommendations, including that DHS put in place an oversight process to ensure that programs' schedule goals are developed and updated according to GAO's scheduling best practices. DHS concurred with GAO's recommendations.

#### What GAO Found

As of August 2019, 25 of the 27 Department of Homeland Security (DHS) programs GAO assessed that had approved schedule and cost goals were on track to meet current goals. The remaining two programs breached their schedule or cost goals. This represents an improvement since GAO's last review. However, GAO found that some of the programs that were on track as of August 2019 are at risk of not meeting cost or schedule goals or both in the future. For example, the U.S. Coast Guard's Offshore Patrol Cutter program faces potential cost increases and schedule slips in the future as a result of damages to the shipbuilder's facility from Hurricane Michael in October 2018.

Traceability, which is called for in DHS policy and GAO scheduling best practices, helps ensure that program goals are aligned with program execution plans, and that a program's various stakeholders have an accurate and consistent understanding of those plans and goals. Of the 27 programs GAO assessed, 21 had established baselines after DHS updated its acquisition policy in March 2016 (the most current version of the policy at the beginning of this review). GAO found that the 21 programs' baseline cost and performance goals generally traced to source documents, such as life-cycle cost estimates and planned performance outcomes. However, schedule goals did not generally match up to the programs' integrated master schedules (IMS), as required by DHS acquisition management instruction and as a best practice identified in GAO's Schedule Assessment Guide (see figure).

**Traceability of Acquisition Program Baselines Established after March 2016 to Cost, Schedule, and Performance Documents**



Source: GAO analysis of Department of Homeland Security (DHS) data. | GAO-20-170SP

The lack of traceability between IMSs and schedule goals in the approved acquisition program baselines (APB) indicates that DHS does not have appropriate oversight processes in place to ensure that schedules are accurately reflected in program baselines, in accordance with DHS policy and GAO's best practices. Therefore, DHS cannot ensure that the understanding of program schedules among different stakeholders, including component and DHS leadership is consistent and accurate. As a result, DHS leadership may be approving program schedule goals that do not align with program execution plans.

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**Abbreviations**

ADE	acquisition decision event
APB	acquisition program baseline
DHS	Department of Homeland Security
FYHSP	Future Years Homeland Security Program
IMS	integrated master schedule
JRC	Joint Requirements Council

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LCCE	life-cycle cost estimate
O&M	operations and maintenance
PA&E	Office of Program Analysis and Evaluation
PARM	Office of Program Accountability and Risk Management

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December 19, 2019

Congressional Committees

Each year, the Department of Homeland Security (DHS) invests billions of dollars in a diverse portfolio of major acquisition programs to help execute its many critical missions. In fiscal year 2020 alone, DHS plans to spend more than \$10 billion on these acquisition programs, and ultimately the department plans to invest more than \$200 billion over the life cycle of these programs. DHS and its underlying components are acquiring systems to help secure the border, increase marine safety, screen travelers, enhance cybersecurity, improve disaster response, and execute a wide variety of other operations. Most of DHS's major acquisition programs cost at least \$300 million and take multiple years to acquire.<sup>1</sup>

To help manage these programs, DHS has established an acquisition management policy that we have found to be generally sound in that it reflects key program management practices we have identified in prior work.<sup>2</sup> Over the past decade, we have also found that department leadership has dedicated additional resources and implemented new policies designed to improve acquisition oversight. However, our work has also identified shortcomings in the department's ability to manage its portfolio of major acquisitions and we have made numerous recommendations over the past decade to help address these challenges.<sup>3</sup> For example, we previously recommended that DHS leadership ensure all major programs fully comply with the acquisition management policy by obtaining department-level approval for acquisition documents before the programs are allowed to proceed. We have also recommended that DHS specifically assess whether adequate funding is

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<sup>1</sup>DHS defines major acquisition programs as those with life-cycle cost estimates of \$300 million or more. In some cases, DHS may define a program with a life-cycle cost estimate less than \$300 million a major acquisition if it has significant strategic or policy implications for homeland security.

<sup>2</sup>GAO, *Homeland Security: DHS Requires More Disciplined Investment Management to Help Meet Mission Needs*, [GAO-12-833](#) (Washington, D.C.: Sept. 18, 2012).

<sup>3</sup>GAO, *High-Risk Series: An Update*, [GAO-05-207](#) (Washington, D.C.: January 2005). For our most recent report, see *High-Risk Series: Substantial Efforts Needed to Achieve Greater Progress on High-Risk Areas*, [GAO-19-157SP](#) (Washington, D.C.: Mar. 6, 2019). For examples of past GAO work, see a list of related GAO products at the end of this report.

available during all program reviews.<sup>4</sup> In response to these recommendations, DHS has taken several steps to improve acquisition management, such as strengthening implementation of its acquisition management policy and requiring components to certify that programs are affordable before they are approved to move through the acquisition life cycle.<sup>5</sup> Nonetheless, DHS has not fully addressed some of our other recommendations. For example, in April 2017, we found that DHS policy required programs to establish schedule, cost, and performance baselines prior to gaining full knowledge about the program's technical requirements.<sup>6</sup> As a result, DHS programs were not matching their needs with available resources before starting product development, which increased programs' risk for cost growth, schedule slips, and inconsistent performance. We recommended that DHS update its acquisition policy to require that major acquisition programs' technical requirements are well defined and key technical reviews are conducted prior to approving programs to initiate product development and establishing acquisition program baselines (APB), in accordance with acquisition best practices. Although DHS has begun to update its acquisition policy, as of October 2019 it has yet to fully implement this recommendation.

The Explanatory Statement accompanying a bill to the DHS Appropriations Act, 2015 contained a provision for GAO to conduct ongoing reviews of major DHS acquisition programs, as directed in the Senate report.<sup>7</sup> This is our fifth review of major DHS acquisition programs. This report assesses the extent to which (1) DHS's major acquisition programs are on track to meet their schedule and cost goals, and (2) current program baselines trace to key acquisition documents.

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<sup>4</sup>[GAO-12-833](#); GAO, *Homeland Security Acquisitions: DHS Could Better Manage Its Portfolio to Address Funding Gaps and Improve Communications with Congress*, [GAO-14-332](#) (Washington, D.C.: Apr. 17, 2014).

<sup>5</sup>The 2019 revision to the DHS acquisition management policy makes a change to the certification made by Component Senior Financial Officers. Affordable means that over the next 5 years the anticipated funding will be adequate to support the program.

<sup>6</sup>GAO, *Homeland Security Acquisitions: Earlier Requirements Definition and Clear Documentation of Key Decisions Could Facilitate Ongoing Progress*, [GAO-17-346SP](#) (Washington, D.C.: Apr. 6, 2017).

<sup>7</sup>Explanatory Statement submitted by Mr. Rogers of Kentucky, Chairman of the House Committee on Appropriations, regarding H.R. 240, Department of Homeland Security Appropriations Act, 2015 (published in Cong. Record, Jan. 13, 2015, at p. H276).

To answer these objectives, we reviewed 29 of DHS's 80 major acquisition programs. This included all 17 of DHS's Level 1 acquisition programs—those with life-cycle cost estimates (LCCE) of \$1 billion or more—that were in the process of obtaining new capabilities at the initiation of our audit. We also selected 12 other major acquisition programs that we or DHS management identified as at risk of not meeting their schedules, cost estimates, or capability requirements. Six of these 12 programs were Level 1 acquisitions that were either delivering capabilities to end users, or establishing plans to do so. The other six programs were Level 2 acquisitions with LCCEs between \$300 million and less than \$1 billion.

Appendix I presents individual assessments of and information about each of the 29 programs we reviewed. These assessments include key information, such as the status of programs' schedules, costs, projected funding levels, testing, and staffing. Our objective for the 2-page assessments is to provide decision makers a means to quickly gauge the programs' progress and their potential cost, schedule, performance, or funding risks.

To determine the extent to which the 29 programs we selected are on track to meet their schedule and cost goals, we analyzed available acquisition documentation, such as APBs, which contain information on programs' schedules and cost estimates. Since the November 2008 update to DHS's overarching acquisition management directive, these documents have required DHS-level approval; therefore, we used November 2008 as the starting point for our analysis. We found that 27 of the 29 programs had one or more department-approved LCCEs and APBs between November 2008 and August 2019. The remaining two programs were early in the acquisition process and planned to establish department-approved schedule and cost goals during our review. However, these programs were delayed in getting department approval for their initial APBs for various reasons and we therefore excluded them from our analysis. We assessed the 27 programs against the most recent DHS acquisition management directive and instruction updates (March 2016) because these were current at the time our review began. We used the APBs and other program documents to construct a data collection instrument for each program, determining whether the programs had experienced schedule slips or cost growth, or whether they were on track against their established baselines as of August 31, 2019. We also reviewed the Future Years Homeland Security Program (FYHSP) report to Congress for fiscal years 2020-2024—which presents 5-year funding

plans for each of DHS's major acquisition programs—to assess the affordability of DHS's acquisition portfolio.

To determine the extent to which current program baselines trace to key acquisition documents, we reviewed DHS acquisition policy and supplemental guidance to identify documents that programs are required to complete to provide the basis for programs' cost, schedule, and performance parameters in APBs. Of the 27 programs we assessed with established baselines, we found that 21 programs had established or revised their APBs after DHS updated its acquisition management instruction in March 2016, which was the most current version of the guidance when we initiated our review. Therefore, for each of these 21 programs we reviewed the most recent APB and identified documents that were used as the basis for cost, schedule, and performance parameters. We then compared the APB cost, schedule, and performance parameters to the information in the underlying documents. We determined that the program was traceable if the information from the underlying documentation was the same as the cost, schedule, and performance parameters in the APB. In addition, we interviewed officials from headquarters organizations to discuss how policies related to developing APBs are being implemented and clarified requirements for establishing APB parameters. We interviewed component and program officials to identify causes of inconsistencies between the approved APB and documents that provided the basis for approved cost, schedule, and performance parameters. We included programs in our analysis with APBs approved between March 2016 and February 2019. At the time we initiated this review, the March 2016 policies and procedures were current, but the policies and procedures were subsequently updated beginning in February 2019. Appendix II provides detailed information on our scope and methodology.

We conducted this performance audit from April 2018 to December 2019 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

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## Background

To help manage its multi-billion dollar acquisition investments, DHS has established policies and processes for acquisition management, requirements development, test and evaluation, and resource allocation. The department uses these policies and processes to deliver systems that are intended to close critical capability gaps, helping enable DHS to execute its missions and achieve its goals.

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### Acquisition Management Policy

DHS policies and processes for managing its major acquisition programs are primarily set forth in its Acquisition Management Directive 102-01 and Acquisition Management Instruction 102-01-001. DHS issued the initial version of this directive in November 2008 in an effort to establish an acquisition management system that effectively provides required capability to operators in support of the department's missions. DHS has issued multiple updates to its acquisition management directive and instruction, in part to be responsive to GAO's recommendations. DHS issued the current version of the directive in February 2019 and the current version of the instruction in May 2019; however, we did not assess programs against these updates because the programs in our review established initial baselines prior to the approval of the directive and instruction.<sup>8</sup> DHS's Under Secretary for Management is currently designated as the department's Chief Acquisition Officer and, as such, is responsible for managing the implementation of the department's acquisition policies.

DHS's Under Secretary for Management serves as the acquisition decision authority for the department's largest acquisition programs, those with LCCEs of \$1 billion or greater. Component Acquisition Executives—the most senior acquisition management officials within each

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<sup>8</sup>DHS has issued multiple updates to its acquisition management directive and instruction. DHS issued the current version of the directive on February 25, 2019, and the revised version of the instruction on May 3, 2019. DHS also issued a separate Systems Engineering Life Cycle Guidebook (DHS Guidebook 102-01-103-01) on April 18, 2016 that outlines the technical framework underlying DHS's acquisition management system; but in October 2019, DHS officials stated they were still in the process of updating this Guidebook to reflect the changes to the acquisition management directive and instruction. We will incorporate the changes in these policies in future assessments of DHS major acquisition programs.

of DHS’s components—may be delegated acquisition decision authority for programs with cost estimates between \$300 million and less than \$1 billion. Table 1 identifies how DHS has categorized the 29 major acquisition programs we reviewed in this report, and table 8 in appendix II specifically identifies the programs within each level.<sup>9</sup>

**Table 1: DHS Acquisition Levels for Selected Major Acquisition Programs**

Level	Life-cycle cost estimates	Acquisition decision authority	Number of programs reviewed in this report
1	Greater than or equal to \$1 billion	Under Secretary for Management/Chief Acquisition Officer	23
2	\$300 million or more, but less than \$1 billion	Under Secretary for Management/Chief Acquisition Officer, or the Component Acquisition Executive	6

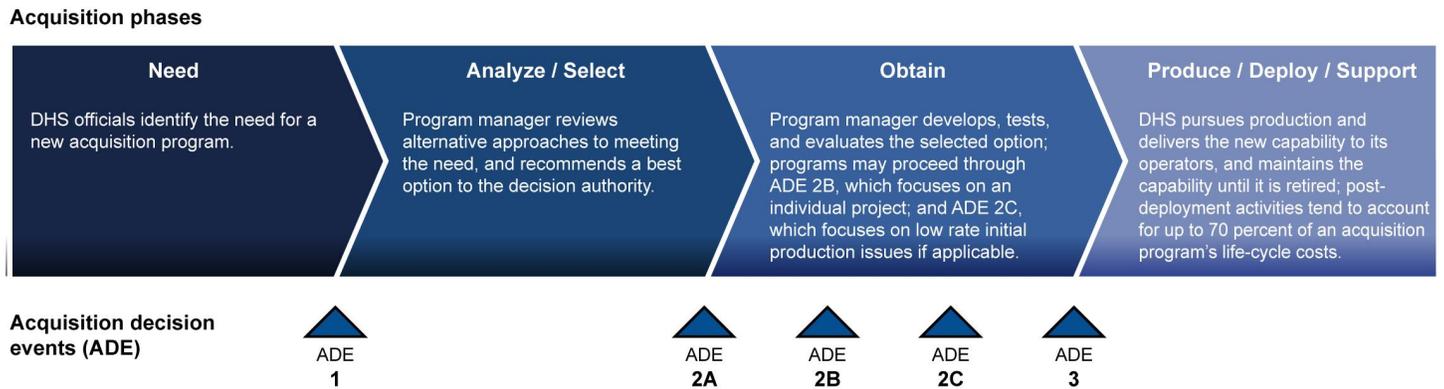
Source: GAO analysis of Department of Homeland Security (DHS) data. | GAO-20-170SP

DHS acquisition management policy establishes that a major acquisition program’s decision authority shall review the program at a series of predetermined acquisition decision events (ADE) to assess whether the major program is ready to proceed through the acquisition life cycle phases. Depending on the program, these events can occur within months of each other or be spread over several years. Figure 1 depicts the acquisition life cycle in the March 2016 version of DHS acquisition management policy.<sup>10</sup>

<sup>9</sup>See table 8 in appendix II for the specific programs within each level, including the two programs we did not assess because they were delayed in establishing their initial APBs.

<sup>10</sup>The 2019 revision to the DHS acquisition management policy modifies entrance criteria for ADEs. For example, the revised policy requires the APB be approved by ADE 2B, which previously occurred at ADE 2A. We will assess the new version of the policy in future assessments.

**Figure 1: DHS Acquisition Life Cycle for Major Acquisition Programs**



Source: GAO analysis of Department of Homeland Security (DHS) data. | GAO-20-170SP

Note: Programs may develop capabilities through individual projects, segments, or increments, which are approved at acquisition decision event (ADE) 2B. Programs without individual projects, segments, or increments may conduct a combined ADE 2A/2B since ADE 2B is the first milestone at which programs are required to submit certain acquisition documents. The 2019 revision to the DHS acquisition management policy modifies entrance criteria for ADEs. For example, the revised policy requires the acquisition program baseline be approved by ADE 2B, which previously occurred at ADE 2A. We will assess the new version of the policy in our next annual assessment.

An important aspect of an ADE is the decision authority's review and approval of key acquisition documents. See table 2 for a description of the type of key acquisition documents identified in the March 2016 acquisition management directive and instruction that required department-level approval before a program moves to the next acquisition phase.<sup>11</sup>

**Table 2: Key Acquisition Documents Requiring Department-level Approval**

Document	Description
Capability Development Plan	<ul style="list-style-type: none"> <li>Serves as the agreement between the component head, program manager, and the acquisition decision authority on the activities, cost, and schedule for the analysis and selection of potential solutions to fill a mission need.</li> </ul>
Operational Requirements Document	<ul style="list-style-type: none"> <li>Captures the business or operational user requirements and identifies which of these requirements are key performance parameters.</li> <li>Describes the mission, objectives, and capabilities in operationally relevant terms.</li> </ul>

<sup>11</sup>The 2019 revision to the DHS acquisition management policy makes some adjustments to program documentation requirements for ADEs. For example, the operational requirements documents will address cybersecurity threats, and the life-cycle cost estimate will incorporate those threat and mitigation costs. We will assess the new version of the policy in future assessments.

Document	Description
Acquisition Plan	<ul style="list-style-type: none"> <li>Provides a top-level plan for the overall acquisition approach.</li> <li>Describes why the solution is in the government's best interest and why it is the most likely to succeed in delivering capabilities to operators.</li> </ul>
Integrated Logistics Support Plan	<ul style="list-style-type: none"> <li>Defines the strategy for ensuring the supportability and sustainment of a future capability.</li> <li>Provides critical insight into the approach, schedule, and funding requirements for integrating supportability requirements into the systems engineering process.</li> </ul>
Life-Cycle Cost Estimate	<ul style="list-style-type: none"> <li>Provides an exhaustive and structured accounting of all resources and associated cost elements required to develop, produce, deploy, and sustain a particular program.</li> </ul>
Acquisition Program Baseline	<ul style="list-style-type: none"> <li>Establishes a program's critical baseline cost, schedule, and performance parameters.</li> <li>Expresses the parameters in measurable, quantitative terms, which must be met in order to accomplish the program's goals.</li> </ul>
System Engineering Life Cycle Tailoring Plan	<ul style="list-style-type: none"> <li>Tailors the phases, products, and reviews in the System Engineering Life Cycle to meet the specific needs of each program and project.</li> </ul>
Test and Evaluation Master Plan	<ul style="list-style-type: none"> <li>Documents the overarching test and evaluation approach for the acquisition program.</li> <li>Describes the developmental and operational test and evaluation needed to determine a system's technical performance, operational effectiveness/suitability, and limitations.</li> </ul>

Source: GAO presentation of Department of Homeland Security (DHS) information. | GAO-20-170SP

DHS acquisition management policy establishes that the APB is the agreement between program, component, and department-level officials establishing how systems being acquired will perform, when they will be delivered, and what they will cost. Specifically, the APB establishes a program's schedule, costs, and key performance parameters. DHS defines key performance parameters as a program's most important and non-negotiable requirements that a system must meet to fulfill its fundamental purpose. For example, a key performance parameter for an aircraft may be airspeed and a key performance parameter for a surveillance system may be detection range.

The APB establishes objective (target) and threshold (maximum acceptable for cost, latest acceptable for schedule, and minimum acceptable for performance) baselines. According to DHS policy, if a program fails to meet any schedule, cost, or performance threshold approved in the APB, it is considered to be in breach. Programs in breach are required to notify their acquisition decision authority and develop a remediation plan that outlines a timeframe for the program to return to its APB parameters, re-baseline—that is, establish new schedule, cost, or performance goals—or have a DHS-led program review that results in recommendations for a revised baseline.

In addition to the acquisition decision authority, other bodies and senior officials support DHS's acquisition management function:

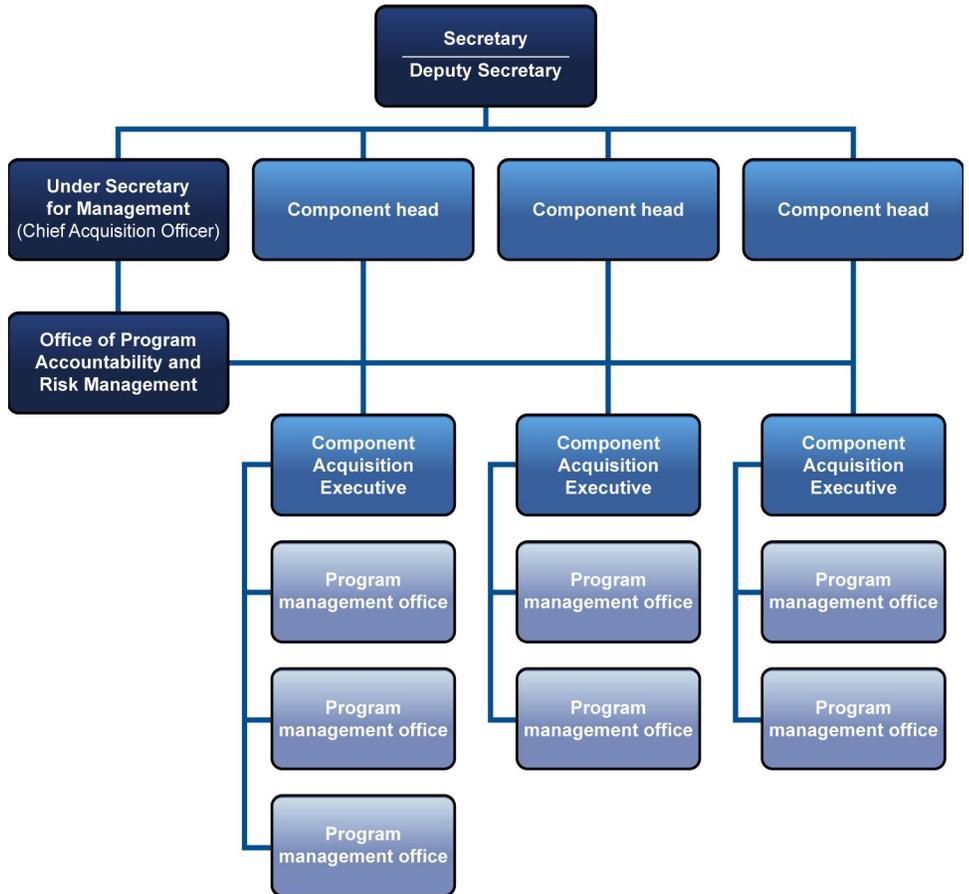
- **The Acquisition Review Board** reviews major acquisition programs for proper management, oversight, accountability, and alignment with the department's strategic functions at ADEs and other meetings as needed. The board is chaired by the acquisition decision authority or a designee and consists of individuals who manage DHS's mission objectives, resources, and contracts.
- **The Office of Program Accountability and Risk Management (PARM)** is responsible for DHS's overall acquisition governance process, supports the Acquisition Review Board, and reports directly to the Under Secretary for Management. PARM develops and updates program management policies and practices, reviews major programs, provides guidance for workforce planning activities, provides support to program managers, and collects program performance data.
- **Components**, such as U.S. Customs and Border Protection, the Transportation Security Administration, and the U.S. Coast Guard sponsor specific acquisition programs.<sup>12</sup> The head of each component is responsible for oversight of major acquisition programs once the programs complete delivery of all planned capabilities to end users.
  - **Component Acquisition Executives** within the components are responsible for overseeing the execution of their respective portfolios.
  - **Program management offices**, also within the components, are responsible for planning and executing DHS's individual programs. They are expected to do so within the cost, schedule, and performance parameters established in their APBs. If they cannot do so, programs are considered to be in breach and must take specific steps, as noted above.

Figure 2 depicts the relationship between acquisition managers at the department, component, and program level.

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<sup>12</sup>DHS's components consist of operational components—those that have responsibility for directly achieving one or more of the department's missions or activities—and support components—those that generally provide assistance or guidance to other DHS components or external organizations.

**Figure 2: DHS's Acquisition Management Structure**



- Department level
- Component level
- Program level

Source: GAO analysis of Department of Homeland Security (DHS) data. | GAO-20-170SP

## Requirements Development Process

In 2016, we found that DHS had not effectively implemented or adhered to its review process for major acquisitions and recommended that DHS reinstate the Joint Requirements Council (JRC) to review and approve acquisition requirements and assess potential duplication of effort across

the department.<sup>13</sup> DHS established a JRC to develop and lead a component-driven joint requirements process for the department. In March 2016, DHS revised its policy instruction to reflect the addition of the JRC as an acquisition oversight body. Among other responsibilities, the JRC is to provide requirements-related advice and validate key acquisition documentation to prioritize requirements and inform DHS investment decisions among its components. The JRC chair is a member of the Acquisition Review Board and advises the board on capability gaps, needs, and requirements at key milestones in the acquisition life cycle. In March 2019, we reported that the JRC could better fulfill its mission by identifying overlapping or common requirements, and by making recommendations to senior leadership to inform budget decisions and help ensure that DHS uses its finite investment resources wisely.<sup>14</sup> We will continue to monitor the JRC's efforts through GAO's high risk work.

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## Test and Evaluation Policy

In May 2009, DHS established policies that describe processes for testing the capabilities delivered by the department's major acquisition programs.<sup>15</sup> The primary purpose of test and evaluation is to provide timely, accurate information to managers, decision makers, and other stakeholders to reduce programmatic, financial, schedule, and performance risks. We provide an overview of each of the 29 programs' test activities in the individual program assessments presented in appendix I.

DHS testing policy assigns specific responsibilities to particular individuals and entities throughout the department:

- **Program managers** have overall responsibility for planning and executing their programs' testing strategies, including scheduling and funding test activities and delivering systems for testing. They are also

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<sup>13</sup>DHS re-established the JRC in June 2014. For more information, see GAO, *Homeland Security Acquisitions: Joint Requirements Council's Initial Approach Is Generally Sound and It Is Developing a Process to Inform Investment Priorities*, [GAO-17-171](#) (Washington, D.C.: Oct. 24, 2016).

<sup>14</sup>[GAO-19-157SP](#).

<sup>15</sup>DHS issued a revised version of its Test and Evaluation Directive 026-06 on May 5, 2017, and a revised instruction for implementing this directive on July 5, 2017.

responsible for controlling developmental testing, which is used to assist in the development and maturation of products, manufacturing, or support processes. Developmental testing includes engineering-type tests used to verify that design risks are minimized, substantiate achievement of contract technical performance, and certify readiness for operational testing.

- **Operational test agents** are responsible for planning, conducting, and reporting on operational test and evaluation to identify whether a system can meet its key performance parameters and provide an evaluation of the operational effectiveness, suitability, and cybersecurity of a system in a realistic environment. Operational effectiveness refers to the overall ability of a system to provide a desired capability when used by representative personnel. Operational suitability refers to the degree to which a system can be placed into field use and sustained satisfactorily. Operational cybersecurity refers to the degree to which a system is able to accomplish its mission in a cyber-contested environment.<sup>16</sup> The operational test agents may be organic to the component, another government agency, or a contractor, but must be independent of the developer to present credible, objective, and unbiased conclusions.
- **The Director, Office of Test and Evaluation** is responsible for approving major acquisition programs' operational test agent and test and evaluation master plans, among other things. A program's test and evaluation master plan must describe the developmental and operational testing needed to determine technical performance and operational effectiveness, suitability, and cybersecurity. As appropriate, the Director is also responsible for observing operational tests, reviewing operational test agents' reports, and assessing the reports. Prior to a program's ADE 3, the Director provides the program's acquisition decision authority a letter of assessment that includes an appraisal of the program's operational test, a concurrence or non-concurrence with the operational test agent's evaluation, and any further independent analysis.<sup>17</sup>

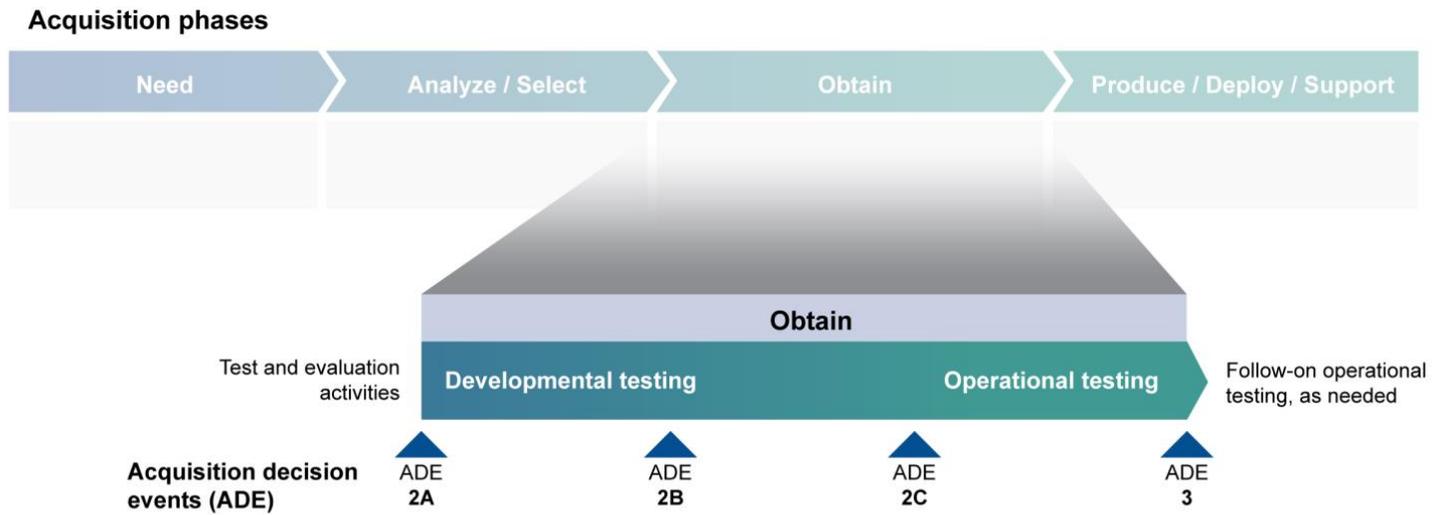
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<sup>16</sup>DHS initially began using the term "cyber resiliency" instead of "cybersecurity" in October 2018. As a result, we use both terms—cybersecurity and cyber resiliency—throughout the report.

<sup>17</sup>The 2019 revision to the DHS acquisition management policy states that the Director may also provide a letter of assessment prior to ADE 2C, ADE 3 and other ADEs, as appropriate.

As an acquisition program proceeds through its life cycle, the testing emphasis moves gradually from developmental testing to operational testing. See figure 3.<sup>18</sup>

**Figure 3: Test Activities Established by DHS Policy within the Obtain Phase**



Source: GAO analysis of Department of Homeland Security (DHS) documents. | GAO-20-170SP

Note: The 2019 revision to the DHS acquisition management policy makes some adjustments to entrance criteria and documentation requirements for acquisition decision events (ADE). Under the new policy, Director, Office of Test and Evaluation approves the Test and Evaluation Master Plan before ADE 2A rather than ADE 2B. In addition to operational testing, the program completes cybersecurity testing to inform ADE 3. We will assess the new version of the policy in our next assessment.

## Resource Allocation Process

DHS has established a planning, programming, budgeting, and execution process to allocate resources to acquisition programs and other entities

<sup>18</sup>The 2019 revision to the DHS acquisition management policy makes some adjustments to entrance criteria and documentation requirements for ADEs. Under the new policy, Director, Office of Test and Evaluation approves the Test and Evaluation Master Plan before ADE 2A rather than ADE 2B. In addition to operational testing, the program completes cybersecurity testing to inform ADE 3. We will assess the new version of the policy in future assessments.

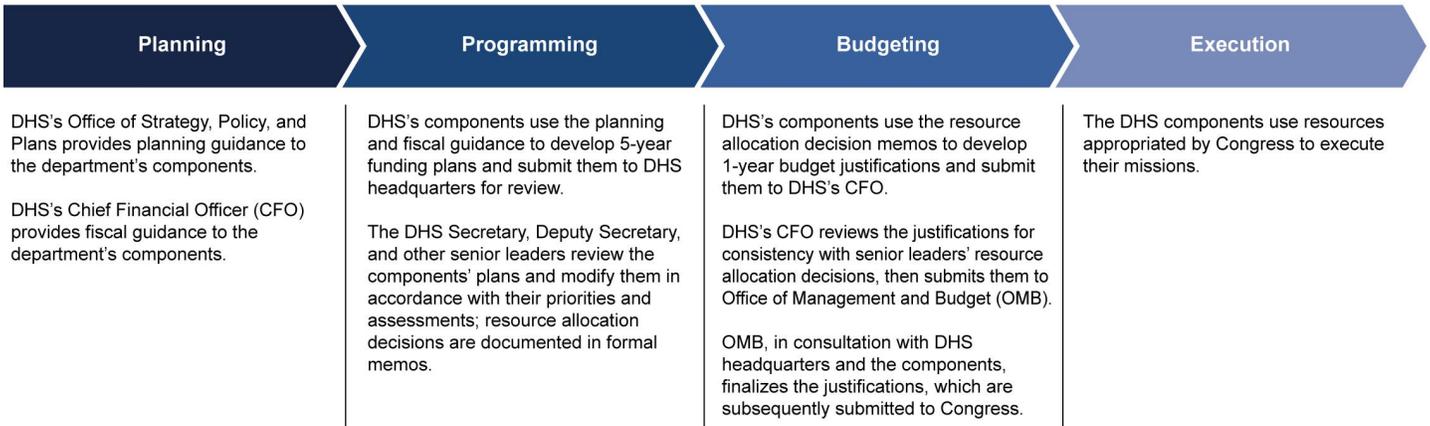
throughout the department.<sup>19</sup> DHS uses this process to produce the department's annual budget request and multi-year funding plans presented in the FYHSP report, a database that contains, among other things, 5-year funding plans for DHS's major acquisition programs. According to DHS guidance, the 5-year plans should allow the department to achieve its goals more efficiently than an incremental approach based on 1-year plans. DHS guidance also states that the FYHSP articulates how the department will achieve its strategic goals within fiscal constraints.

At the outset of the annual resource allocation process, the department's Office of Strategy, Policy, and Plans and Office of the Chief Financial Officer provide planning and fiscal guidance, respectively, to the department's components. In accordance with this guidance, the components should submit 5-year funding plans to the Chief Financial Officer. These plans are subsequently reviewed by DHS's senior leaders, including the DHS Secretary and Deputy Secretary. DHS's senior leaders are expected to modify the plans in accordance with their priorities and assessments, and they document their decisions in formal resource allocation decision memorandums. DHS submits the revised funding plans to the Office of Management and Budget, which uses them to inform the President's annual budget request—a document sent to Congress requesting new budget authority for federal programs, among other things. In some cases, the funding appropriated to certain accounts in a given fiscal year remains available for obligation and can be carried over to subsequent fiscal years. Figure 4 depicts DHS's annual resource allocation process.

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<sup>19</sup>Department of Homeland Security, Directive 101-01, Planning, Programming, Budgeting, and Execution, July 14, 2016; Planning, Programming, Budgeting, and Execution Instruction 101-01-001, July 15, 2016; Planning, Programming, Budgeting, and Execution System Operating Handbook, revised July 2016.

**Figure 4: DHS’s Annual Planning, Programming, Budgeting, and Execution Process**



Source: GAO analysis of Department of Homeland Security (DHS) data. | GAO-20-170SP

Federal law requires DHS to submit an annual FYHSP report to Congress at or about the same time as the President’s budget request.<sup>20</sup>

Two offices within DHS’s Office of the Chief Financial Officer support the annual resource allocation process:

- The Office of Program Analysis and Evaluation (PA&E)** is responsible for establishing policies for the annual resource allocation process and overseeing the development of the FYHSP. In this role, PA&E develops the Chief Financial Officer’s planning and fiscal guidance, reviews the components’ 5-year funding plans, advises DHS’s senior leaders on resource allocation issues, maintains the FYHSP database, and submits the annual FYHSP report to Congress.
- The Cost Analysis Division** is responsible for reviewing, analyzing, and evaluating acquisition programs’ LCCEs to ensure the cost of DHS programs are presented accurately and completely, in support of resource requests. This division also supports affordability assessments of the department’s budget, in coordination with PA&E, and develops independent cost analyses for major acquisition programs and independent cost estimates upon request by DHS’s Under Secretary for Management or Chief Financial Officer.

<sup>20</sup>DHS is required to include the same type of information, organizational structure, and level of detail in the FYHSP as the Department of Defense is required to include in its Future Years Defense Program. 6 U.S.C. § 454.

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## Reflecting Improvements Since 2018, 25 of 27 Programs Are on Track to Meet Current Schedule and Cost Goals, with Two Programs Breaching Goals

Of the 27 programs we assessed with approved APBs, 25 are on track to meet their current schedule and cost goals as of August 2019. Of these 25 programs, 11 programs revised their schedule and cost goals in response to a prior breach of their APBs or to incorporate program changes.

Of the 27 programs, two programs breached their schedule or cost goals between January 2018 and August 2019, and as of August 2019 had not yet re-baselined. This shows improvement from our prior review where seven programs were in breach.<sup>21</sup> In addition, some programs, although currently on track to meet their goals, are nonetheless facing risks of breaching schedule or cost goals, or have plans to revise their baseline in the future. Further, as a result of the fiscal year 2019 partial government shutdown, five programs received approval for schedule adjustments, and other programs reported difficulty obligating funds before the end of the fiscal year. Finally, our analysis showed that seven programs are projected to experience an acquisition funding gap in fiscal year 2020, but, according to program officials, these gaps will be mitigated.

We also reviewed two programs that were early in the acquisition process and planned to establish department-approved schedule and cost goals during our review. However, these programs were delayed in getting department approval for their initial APBs for various reasons; therefore, we excluded them from our assessment of whether programs were on track to meet schedule and cost goals. We plan to assess these programs in our future reviews; however, we provide more details on these two programs in the individual assessments in appendix I.

Table 3 summarizes our findings regarding the status of major acquisition programs meeting their schedule and cost goals, and we present more detailed information after the table.

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<sup>21</sup>For our prior review, see [GAO-18-339SP](#).

**Table 3: Major DHS Acquisition Programs' Progress against Current Schedule and Cost Goals between January 2018 and August 2019**

Component	Program	On track to meet current goals as of August 2019	Changed schedule and/or cost goals between January 2018 and August 2019	Established initial baseline between January 2018 and August 2019	New programs GAO did not assess
Customs and Border Protection	Automated Commercial Environment	Yes	Yes	No	No
	Biometric Entry-Exit Program	Yes	Yes	Yes	No
	Border Wall System Program	Yes	Yes	Yes	No
	Cross Border Tunnel Threat	n/a	n/a	n/a	Yes
	Integrated Fixed Towers	No	No	No	No
	Medium Lift Helicopter (UH-60)	Yes	Yes	No	No
	Multi-Role Enforcement Aircraft	Yes	Yes	No	No
	Non-Intrusive Inspection Systems Program	Yes	No	No	No
	Remote Video Surveillance System	n/a	n/a	n/a	Yes
	Tactical Communications Modernization	Yes	No	No	No
	TECS (not an acronym) Modernization	Yes	No	No	No
Cybersecurity and Infrastructure Security Agency	Continuous Diagnostics and Mitigation	Yes	No	No	No
	National Cybersecurity Protection System	Yes	Yes	No	No
	Next Generation Networks Priority Services	Yes	Yes	No	No
DHS Management Directorate	Homeland Advanced Recognition Technology	Yes	Yes	No	No
Federal Emergency Management Agency	Logistics Supply Chain Management System	Yes	No	No	No
Science and Technology Directorate	National Bio and Agro-Defense Facility	Yes	No	No	No
Transportation Security Administration	Advanced Technology	Yes	No	Yes	No
	Credential Authentication Technology	Yes	No	Yes	No
	Electronic Baggage Screening Program	No	No	No	No
	Technology Infrastructure Modernization	Yes	Yes	No	No
U.S. Coast Guard	Fast Response Cutter	Yes	No	No	No
	H-65 Conversion-Sustainment Program	Yes	Yes	No	No
	Long Range Surveillance Aircraft (HC-130H/J)	Yes	No	No	No
	Medium Range Surveillance Aircraft (HC-144A & C-27J)	Yes	No	No	No
	National Security Cutter	Yes	No	No	No

Component	Program	On track to meet current goals as of August 2019	Changed schedule and/or cost goals between January 2018 and August 2019	Established initial baseline between January 2018 and August 2019	New programs GAO did not assess
	Offshore Patrol Cutter	Yes	No	No	No
	Polar Security Cutter	Yes	No	Yes	No
U.S. Citizenship and Immigration Services	Transformation	Yes	Yes	No	No

Legend: ● Yes, — No, N/A Not Assessed

Source: GAO analysis of Department of Homeland Security (DHS) data. | GAO-20-170SP

## Twenty-five of 27 Programs on Track to Meet Schedule and Cost Goals as of August 2019

We found that 25 of 27 programs we reviewed with department-approved APBs were on track to meet their current baseline schedule and cost goals as of August 2019. Of these, 11 programs met schedule and cost goals established prior to December 2017. Six of these programs are in the process of revising their baselines or plan to revise their baselines in the near future to account for program changes or to add capabilities. For example, the U.S. Coast Guard’s Fast Response Cutter and National Security Cutter programs plan to revise their baselines because they received additional funding to procure more cutters than reflected in their current baselines. Program officials said these programs are planning to update their APBs in fiscal year 2020 to reflect these changes.

In addition, as shown in table 3, five of the 25 programs that met schedule and cost goals had only recently established initial APBs (between January 2018 and August 2019). Three of these five—Customs and Border Protection’s Biometric Entry-Exit program and Border Wall System Program, and the U.S. Coast Guard’s Polar Security Cutter—are new Level 1 major acquisition programs and as of August 2019 their combined life cycle costs were approximately \$15 billion. In addition, DHS recently approved baselines for two Transportation Security Administration programs—Advanced Technology and Credential Authentication Technology. These programs were previously projects under the Passenger Screening Program, but according to Transportation Security Administration officials, transitioned into standalone programs to better align program office staffing to capabilities and focus on mitigating capability gaps, among other things.

## Eleven of the 25 Programs on Track Had Revised Their Schedule and Cost Goals

Eleven of the 25 programs that we found to be on track to meet current schedule and cost goals revised schedule and cost goals between January 2018 and August 2019. DHS leadership approved revised baselines for these programs for two primary reasons: to remove the program from breach status or to account for program changes, or both.

Five of the 11 programs that revised their baselines did so in response to a breach of their cost or schedule goals and were subsequently removed from breach status. See table 4.

**Table 4: Programs That Re-Baselined between January 2018 and August 2019 in Response to Breaches of Cost and Schedule Goals**

Component	Program	Breach type	Time in breach status	Cost change	Schedule change
Customs and Border Protection	Automated Commercial Environment	Cost and schedule	15 months	\$531 million increase (11 percent)	Full operational capability date slipped 16 months
Customs and Border Protection	Medium Lift Helicopter (UH-60)	Schedule	7 months	\$515 million decrease (25 percent)	Acquisition Decision Event 3 slipped 10 months
DHS Management Directorate	Homeland Advanced Recognition Technology	Schedule	23 months	\$2 billion decrease (33 percent)	Full operational capability date slipped 33 months
U.S. Coast Guard	H-65 Conversion - Sustainment Program	Schedule	16 months	\$202 million decrease (1 percent)	Full operational capability date slipped 30 months
U.S. Citizenship and Immigration Services	Transformation	Schedule	22 months	\$598 million increase (19 percent)	Full operational capability date slipped 12 months

Source: GAO analysis of Department of Homeland Security (DHS) data. | GAO-20-170SP

Notes: The Medium Lift Helicopter (UH-60) program updated its baseline in June 2018 and the program's ADE 3 decision date slipped from September 2017 to September 2018. However, the program achieved ADE 3 in July 2018—two months ahead of schedule.

DHS leadership approved revised baselines for these five programs following various actions by the program offices such as:

- **Customs and Border Protection’s Automated Commercial Environment** breached its cost and schedule goals in April 2017, which Customs and Border Protection officials attribute to an underestimation of the level of effort needed to complete development. The program revised its approach to developing remaining functionality by removing some capability from the program’s baseline and delaying development until funding is provided. As shown in table 4, the full operational capability date was delayed. The program’s total life-cycle cost increase is primarily attributed to a change in how threshold cost goals were calculated.
- **Customs and Border Protection’s Medium Lift Helicopter** re-baselined following a schedule breach of its ADE 3, among other things. As part of the re-baselining efforts, the program revised its cost goals to remove personnel costs and update the aircraft operational hours, among other things, which then resulted in a cost decrease of \$515 million. Officials reported that the effect of the breach on the program’s schedule was minimal because the program was able to make adjustments to its testing schedule to assess multiple aircraft concurrently.
- **DHS Management Directorate’s Homeland Advanced Recognition Technology** re-baselined following multiple delays in awarding contracts and issues stemming from a subsequent bid protest. The re-baseline included a cost goal decrease resulting from an enhanced solution for biometric data storage.
- **U.S. Coast Guard’s H-65 Conversion - Sustainment Program** re-baselined to address delays which USCG officials primarily attributed to underestimating the technical effort necessary to meet requirements. As part of the re-baseline, the program also added a service life extension program to extend aircraft service life by replacing obsolete components. The program’s total life-cycle cost threshold decreased by approximately \$200 million from its prior APB. Coast Guard officials attribute the decrease to the program’s ability to reduce labor costs, among other things, by synchronizing the service life extension program with other aircraft upgrades.
- **U.S. Citizenship and Immigration Services’ Transformation** program re-baselined in June 2018—lifting a strategic pause that limited new program development for 18 months. The program’s revised APB reflects a re-organization of the Transformation program as well as a new development strategy. The program breached its schedule in September 2016 when it failed to upgrade U.S. Citizenship and Immigration Services’ application processing information system to include applications for naturalization.

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In addition, between January 2018 and August 2019, DHS leadership approved revisions to six programs' baselines that were not prompted by a breach. These programs either planned to revise their baselines to incorporate changes in technology, among other things, or to make changes to their scope.

- **Customs and Border Protection's Biometric Entry-Exit** program revised its schedule goals in March 2019—after establishing an initial baseline in May 2018—to remove ADE 2C, the decision event when low-rate initial production is typically approved.
- **Customs and Border Protection's Border Wall System Program** revised its baseline in August 2018 to replace sections of the border wall system in the San Diego sector. In addition, in May 2019 the program received approval for an additional baseline to extend the border wall system in the Rio Grande Valley sector.
- **Customs and Border Protection's Multi-role Enforcement Aircraft** revised its baseline to increase the program's quantity from 16 to 29 aircraft. The 16 aircraft from the prior APB provided maritime interdiction capabilities. The additional 13 aircraft are for air interdiction capabilities.
- **Cybersecurity and Infrastructure Security Agency's National Cybersecurity Protection System Program** revised its baseline in January 2018 to inform ADEs for the program's information sharing and intrusion-prevention capabilities and to account for schedule and cost changes after bid protests. However, the program updated its APB again in October 2018 to address an error found in the LCCE. Specifically, the LCCE that provided the basis for the program's APB cost goals did not accurately account for the program's sunk costs. In addition, the program added an additional 2 years of costs to its LCCE and revised its approach to estimating threshold costs. Once revised, the program's total life-cycle cost threshold increased by more than \$1.7 billion (41 percent) from the program's January 2018 APB. The program's full operational capability date was extended by two years to March 2021.
- **Cybersecurity and Infrastructure Security Agency's Next Generation Networks Priority Services** revised its baseline in April 2018 to add capability to provide priority access for landline telephone calls to select government officials during emergencies. As a result, the program's full operational capability date was extended by 3 years—to December 2025—and total acquisition costs increased by \$68 million (10 percent).

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- **Transportation Security Administration’s Technology Infrastructure Modernization** program revised its baseline in July 2019 to de-scope the program and narrow the definition of full operational capability. DHS leadership reported that by the time the program had delivered functions needed to meet the needs of end users, the Transportation Security Administration had updated and improved its legacy systems. As a result, costs decreased by \$15 million (1 percent) and the program achieved full operational capability 3 years earlier than previously planned.

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## Two Programs Breached Schedule or Cost Goals and Some Programs Are at Risk of Breaching Goals in the Future

Between January 2018 and August 2019, two programs breached their schedule or cost goals—down from seven programs in our previous assessment.<sup>22</sup> As of August 2019, neither of these programs had revised their baselines.

- **Customs and Border Protection’s Integrated Fixed Towers** program declared a schedule breach of the program’s baseline in February 2019 as a result of delays in negotiations with the Tohono O’odham Nation—a sovereign Native American Nation—regarding access to tribal lands to construct towers and deploy systems. Customs and Border Protection subsequently reached an agreement with the Nation in March 2019. As of September 2019, the program was in the process of revising its APB to adjust deployments within the Nation’s land. Program officials anticipate the program’s full operational capability date will slip from September 2020 to March 2021 as a result of these actions.
- **Transportation Security Administration’s Electronic Baggage Screening Program** updated its LCCE in August 2019 which exceeds its baseline operations and maintenance (O&M) cost threshold. Transportation Security Administration officials attribute the program’s cost breach to an increase in maintenance costs related to sustaining screening technologies longer than initially planned. As of September 2019, the program’s revised APB, which TSA officials said will address the O&M cost increase, had not yet been approved.

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<sup>22</sup>For our prior review, see [GAO-18-339SP](#).

In addition, some of the programs on track as of August 2019 are facing risks that might lead to schedule slips or cost growth in the future. For example,

- U.S. Coast Guard's Offshore Patrol Cutter may experience cost increases and schedule slips in the future. Specifically, the program's shipbuilder reported damages from Hurricane Michael in October 2018 that have resulted in a long-term degradation of its ability to produce the Offshore Patrol Cutters at the previously estimated cost and schedule. As of August 2019, the Coast Guard was still assessing the shipbuilder's report on the damage sustained and the potential effect on the Offshore Patrol Cutter program.
- U.S. Coast Guard's Polar Security Cutter met established cost and schedule milestones between January 2018 and August 2019, but program officials stated that they anticipate a schedule slip because delivery of the lead ship in the awarded contract is two months after the program's APB threshold date. We previously found that the program is at risk of experiencing future schedule delays and cost growth.<sup>23</sup> The program's schedule is driven by the need to address a potential gap in icebreaking capabilities once the Coast Guard's only operational heavy polar icebreaker reaches the end of its service life as early as 2023. As a result, planned delivery dates are not informed by a realistic assessment of shipbuilding activities. We also found that the program is at risk of costing more than estimated because its LCCE—while adhering to most cost estimating best practices—is not fully reliable as it did not quantify the range of possible costs over the entire life of the program.
- Customs and Border Protection's Biometric Entry-Exit program plans to re-baseline and achieve ADE 3—which will authorize full-rate production—in September 2019. However, program officials stated that not all testing will be completed to inform the ADE 3. As a result, DHS leadership will not have data related to the Biometric Entry-Exit system's resiliency to cyberattacks before making this decision.

We provide more information in the individual program assessments in appendix I, and we will continue to monitor these programs in future assessments.

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<sup>23</sup>GAO, *Coast Guard Acquisitions: Polar Icebreaker Program Needs to Address Risks before Committing Resources*, [GAO-18-600](#) (Washington, D.C.: Sept. 4, 2018)

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## Effects from 2019 Partial Government Shutdown Include Schedule Milestone Adjustments and Difficulty Obligating Funds

Due to a lapse in appropriations for fiscal year 2019, the federal government partially shut down from December 22, 2018, to January 25, 2019. Most Level 1 and Level 2 acquisition program staff were furloughed during the partial government shutdown, which affected the execution of these programs. As a result, in March 2019, DHS's Under Secretary for Management, in coordination with PARM, authorized Component Acquisition Executives to request up to a 3-month extension for any program schedule milestone date, and inform PARM of any proposed changes in writing. PARM officials stated that they developed this process to mitigate program schedule risks since the government shutdown was beyond the control of program officials.

Five programs requested and received approval from DHS leadership to extend schedule milestones by 3 months. Of these, three programs reported that the 3-month extension will allow the programs to stay on track to meet their adjusted milestones—Federal Emergency Management Agency's Logistics Supply Chain Management System, Customs and Border Protection's Biometric Entry-Exit, and U.S. Coast Guard's Medium Range Surveillance Aircraft programs. However, Coast Guard officials stated that the Offshore Patrol Cutter program requested approval to extend the program's ADE 2C milestone to enable Coast Guard officials time to assess the shipbuilder's report on damage caused by Hurricane Michael before determining the next steps for the program. The Cybersecurity and Infrastructure Security Agency's Continuous Diagnostics and Mitigation program received approval to extend two schedule milestones—initial operational capability for two segments of the program—because the program experienced delays as a result of the partial government shutdown. In addition, DHS leadership previously directed the program to conduct an ADE 2B for a new segment by March 2019. The ADE 2B has been delayed 9 months to December 2019 to allow the program additional time to complete required acquisition documentation to inform the ADE.

Programs also reported experiencing other effects of the partial government shutdown. Specifically, officials from several programs identified challenges in obligating funds by the end of the fiscal year due to the truncated timeframe. For example, Transportation Security Administration's Electronic Baggage Screening Program officials reported

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that as a result of the partial government shutdown, contract awards had been delayed. These officials explained that contracting obligation activities from the component were compressed into the last two quarters of fiscal year 2019 and the program had to compete for contracting officer resources within the limited timeframe.

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### Affordability Gaps Reported in DHS's 2020-2024 Funding Plan Are Generally Mitigated by Funding from Other Sources

Based on the information presented in the 2020-2024 FYHSP report to Congress, DHS's acquisition portfolio is not affordable over the next 5 years, meaning that the anticipated funding will not be adequate to support the programs. But our analysis found the reported acquisition funding gaps may be overstated when additional information is taken into account. For example, the fiscal year 2020-2024 FYHSP report contained acquisition affordability tables for 21 of the 27 programs we assessed that have approved APBs.<sup>24</sup> Of the 21 programs included in the FYHSP report, 11 were projected to have an acquisition affordability gap in fiscal year 2020.<sup>25</sup> However, some of the cost information used to develop these projections was outdated since the FYHSP report—which was issued in August 2019—relied on cost estimates developed in April 2018. Therefore, we updated the analysis using the programs' current LCCEs based on the approved scope of the program, as of August 2019 (as presented in the individual assessments in appendix I). In addition, we discussed funding gaps with program officials to determine additional funding sources, such as fees collected, funding from previous fiscal years that remained available for obligation—known as carryover funding, funds provided by components, or funding received above what was originally requested.

Based on our analysis, we found that seven programs may have acquisition funding gaps in fiscal year 2020 rather than the 11 identified in the FYHSP report. However, the affordability gap for all seven programs we identified may be overstated because program officials reported that

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<sup>24</sup>Six of the 27 programs we assessed with approved APBs were not included in the fiscal years 2020–2024 FYHSP report because they were not expected to receive acquisition funding.

<sup>25</sup>DHS considers a program to be fully resourced if the latest DHS-approved funding is within 5 percent of its current DHS-funded estimated costs in a given year.

these programs either had carryover funding, received funding above what was requested, or anticipate receiving funding from the component to mitigate the affordability gap, as shown in table 5.

**Table 5: GAO’s Analysis of Fiscal Year 2020 DHS Acquisition Funding Gaps and Mitigation**

Component	Program	Fiscal year 2020 funding gap percentage	Mitigation
Customs and Border Protection	Integrated Fixed Towers	56 percent (\$1.4 million)	Carryover funding
Customs and Border Protection	Non-Intrusive Inspection Systems	38 percent (\$37 million)	Additional funding received
Cybersecurity and Infrastructure Security Agency	Next Generation Networks Priority Service	8 percent (\$4.7 million)	Defer some capabilities
DHS Management Directorate	Homeland Advanced Recognition Technology	71 percent (\$38 million)	Carryover funding/Defer some capabilities
U.S. Coast Guard	Fast Response Cutter	41 percent (\$96 million)	Additional funding received
U.S. Coast Guard	H-65 Conversion -Sustainment Program	11 percent (\$5.9 million)	Carryover funding
U.S. Coast Guard	Long Range Surveillance Aircraft (HC-130H/J)	100 percent (\$23 million)	Additional funding received

Source: GAO analysis of Department of Homeland Security (DHS) life-cycle cost estimate data, as of August 2019. | GAO-20-170SP

Further, officials from several programs in our review told us that the programs were projected to experience a funding gap that could cause future program execution challenges, such as cost growth, or that programs were taking steps to mitigate funding gaps. For example, Customs and Border Protection’s Biometric Entry-Exit program—which is primarily fee-funded—conducted an affordability analysis that showed projected fees had declined. To mitigate risks of a potential affordability gap, program officials stated the number of officers to conduct enforcement activities at airport departure gates was reduced and the program is working with the component to identify other sources of funding. In addition, DHS Management Directorate’s Homeland Advanced Recognition Technology program reported that the program will use carryover funding to address the program’s affordability gap in fiscal year 2020. However, the program will also need to defer development of some additional capabilities to 2021 to remain affordable. In addition, officials from Customs and Border Protection’s Border Wall System Program stated the program is mitigating future acquisition funding gaps, in part by not developing its baseline until after funding amounts are determined. According to officials, this was necessary to mitigate program risks due to uncertainty in funding; however, through DHS’s resource allocation process, the program has requested \$5 billion each year from fiscal year 2020 to fiscal year 2024.

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We elaborate on programs' affordability over the next 5 years in the individual program assessments in appendix I.

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## Cost and Performance Goals Generally Trace to Required Documents, but Schedule Goals Do Not

Traceability, which DHS policy and acquisition best practices call for, helps ensure that program goals are aligned with program execution plans, and that a program's various stakeholders have an accurate and consistent understanding of those plans and goals. We found that the cost and performance goals in the acquisition programs' approved APBs generally traced to the estimated costs identified in LCCEs and key performance parameters identified in operational requirements documents. That is, information in the APB matched the document required to be used as the basis for the baselines. In contrast, the schedule goals in the approved APBs generally did not trace to the Integrated Master Schedule (IMS), as required by the DHS acquisition management instruction and as a best practice identified in GAO's Schedule Assessment Guide.<sup>26</sup> Similarly, we found the required basis for the cost and performance goals is consistently identified in DHS acquisition management policy and guidance, whereas the basis for the schedule goals is not.

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## Acquisition Program Baselines Generally Trace to Required Cost and Performance Documents, but Not to Schedule Documents

We found that cost and performance goals in approved APBs generally traced to estimated costs in LCCEs and key performance parameters in operational requirements documents. However, schedule goals were generally not traceable to the IMSs, as required by DHS acquisition management instruction and as identified as a best practice in GAO's Schedule Assessment Guide. Of the 27 programs we assessed with established baselines, 21 established or revised their APBs after DHS updated its acquisition management instruction in March 2016, which was

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<sup>26</sup>GAO *Schedule Assessment Guide: Best Practices for Project Schedules*, [GAO-16-89G](#) (Washington, D.C.: Dec. 22, 2015).

the most current version of the guidance when we initiated our review. Table 6 shows the results of our analysis for the traceability of baselines to cost, schedule, and performance documents for those 21 programs.

**Table 6: Traceability of Acquisition Program Baseline Goals Established or Revised Between March 2016 and February 2019 to Cost, Schedule, and Performance Documents for Selected Programs**

Component	Program	Cost	Schedule	Performance
Customs and Border Protection	Automated Commercial Environment	Traceable	Traceable	Traceable
	Biometric Entry-Exit Program	Traceable	Not Traceable	Traceable
	Border Wall System Program	Not Traceable	Not Traceable	Traceable
	Medium Lift Helicopter (UH-60)	Traceable	Not Traceable	Traceable
	Multi-Role Enforcement Aircraft	Traceable	Not Traceable	Traceable
	Tactical Communications Modernization	Not Traceable	Traceable	Traceable
	TECS (not an acronym) Modernization	Traceable	Not Traceable	Traceable
Cybersecurity and Infrastructure Security Agency	Continuous Diagnostics and Mitigation	Traceable	Not Traceable	Traceable
	National Cybersecurity Protection System	Traceable	Not Traceable	Traceable
	Next Generation Networks Priority Services	Traceable	Not Traceable	Traceable
DHS Management Directorate	Homeland Advanced Recognition Technology	Traceable	Traceable	Traceable
Federal Emergency Management Agency	Logistics Supply Chain Management System	Traceable	Traceable	Traceable
Transportation Security Administration	Advanced Technology	Traceable	Not Traceable	Traceable
	Credential Authentication Technology	Traceable	Not Traceable	Traceable
	Electronic Baggage Screening Program	Not Traceable	n/a	Traceable
	Technology Infrastructure Modernization	Traceable	Not Traceable	Traceable
U.S. Coast Guard	H-65 Conversion - Sustainment Program	Traceable	Traceable	Traceable
	Medium Range Surveillance Aircraft (HC-144A & C-27J)	Traceable	Not Traceable	Traceable
	National Security Cutter	Traceable	Traceable	Traceable
	Polar Security Cutter	Traceable	Not Traceable	Traceable
U.S. Citizenship and Immigration Services	Transformation	Traceable	Not Traceable	Traceable

Legend: ● Traceable, ○ Not Traceable, N/A - Not Assessed

Source: GAO analysis of Department of Homeland Security (DHS) data. | GAO-20-170SP

Note: We did not assess the schedule for Transportation Security Administration Electronic Baggage Screening Program because all of the program's schedule milestones occurred prior to the program's approved acquisition program baseline.

As shown in table 6, the APB goals traced to the key performance parameters in the operational requirements documents for all 21 programs that we reviewed. Generally, the APB goals traced to the costs

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in the LCCEs, though we found that three programs were not traceable. For example:

- The APB total life-cycle cost goals for Custom and Border Protection's Tactical Communications Modernization program traced to the program's LCCE, but the separate acquisitions and O&M costs were not traceable.
- The Transportation Security Administration's Electronic Baggage Screening Program did not include sunk costs in the LCCE, and as a result the APB cost goals did not trace.

In contrast, we could trace all schedule events and dates in the approved APBs to the programs' IMS for only six of 21 programs. There was variation in how the programs' APBs lacked traceability to the IMS. For example:

- The IMS for the Customs and Border Protection's Border Wall System Program estimates the full operational capability dates to be between October 2021 and December 2021, whereas the approved APB includes an objective date of October 2022 and a threshold date of December 2022.
- The APB for the U.S. Citizenship and Immigration Services' Transformation program does not identify a source for the schedule baseline. Program officials told us that they do not have an IMS and instead they use the schedule in the program's release roadmap, a document that information technology programs use to communicate how they will iteratively deliver features. However, schedule events identified in the APB, such as full operational capability, were not identified in the release roadmap.
- Similarly, we found programs that developed an IMS but did not include all future APB milestones, such as Cybersecurity and Infrastructure Security Agency's Continuous Diagnostics Mitigation and Transportation Security Administration's Credential Authentication Technology.

According to GAO's Schedule Assessment Guide, schedules should be verified to ensure that they are vertically traceable—that is, verified to ensure the consistency of dates, status, and scope requirements between different levels of the schedule and management documents. Further, this guide states that a schedule baseline signifies a consensus of stakeholders on the required sequence of events, resources, and key dates. The IMS is more accurate when stakeholders agree on the

underlying assumptions. These stakeholders would include, for example, program offices, end users, and component and DHS leadership.

Further, DHS acquisition policy requires programs to obtain review and approval of LCCEs and operational requirements documents from various stakeholders within components and DHS headquarters.<sup>27</sup> However, DHS acquisition policy states that approval of IMSs is based on DHS guidance and component policy and that program managers will provide the IMS to DHS in support of the acquisition review process. Officials from PARM and the Office of the Chief Financial Officer told us that the components vary in their capacity to develop schedules and assess schedule risks and there is a lack of expertise within the department to review program schedules. The lack of traceability between IMSs and schedule goals in the APB indicates that DHS does not have an appropriate oversight process in place to ensure APBs trace to schedule goals in the IMSs, in accordance with DHS policy and GAO's best practices. Without this traceability, DHS cannot ensure that the understanding of program schedules among different stakeholders is consistent and accurate. As a result, DHS leadership may be approving program schedule goals that do not align with program execution plans.

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### DHS Acquisition Policy and Guidance Consistently Identifies the Source of Cost and Performance Goals but Not of Schedule Goals

We found that LCCEs and operational requirements documents are consistently identified as the basis of cost and performance goals in DHS's acquisition management policy and guidance. However, we also found that the documents do not consistently require that an IMS be used as the basis of schedule goals. Specifically, DHS's acquisition management instruction and DHS's Systems Engineering Life Cycle Guidebook—which outlines the technical framework for DHS's acquisition management system—differ regarding the source of APB schedule

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<sup>27</sup>Life-cycle cost estimates are approved by component Senior Financial Officers and Component Acquisition Executives before receiving final review and approval by DHS's Chief Financial Officer. Operational requirements documents are approved by Component Acquisition Executives, validated by the Joint Requirements Council, and receive final approval from the Undersecretary for Management or the appointed acquisition decision authority.

milestone dates.<sup>28</sup> Table 7 summarizes our findings on DHS’s acquisition policy and guidance related to developing APB cost, schedule, and performance goals.

**Table 7: DHS Acquisition Policy and Guidance for Documents Used to Develop Acquisition Program Baseline Goals**

	<b>Cost goals</b>	<b>Performance goals</b>	<b>Schedule goals</b>
DHS Instruction 102-01-001, Acquisition Management Instruction (Mar. 9, 2016)	Acquisition Program Baseline (APB) should trace to a Chief Financial Officer approved life-cycle cost estimate.	Performance parameters in the APB are the key performance parameters traceable to the acquisition decision authority-approved operational requirements document.	Schedule parameters in the APB are traceable to an integrated master schedule that has been developed in accordance with the best practices described within GAO’s Schedule Assessment Guide.
DHS Guidebook 102-01-103-01, Systems Engineering Life Cycle Guidebook (Apr. 18, 2016)	An analytically robust life-cycle cost estimate supports, among other things, the cost parameters for inclusion in the APB and support for milestone decisions.	Key performance parameters are highlighted in the operational requirements document and are tracked in the APB.	The APB is a source identified as an input to be used in the development of an integrated master schedule.

Source: GAO analysis of Department of Homeland Security (DHS) guidance. | GAO-20-170SP

DHS’s acquisition management instruction states that the APB should trace to the IMS, which is consistent with GAO’s Schedule Assessment Guide. This instruction differs from the guidance in the Systems Engineering Life Cycle Guidebook, which in contrast, directs programs to use the APB as an input when developing the IMS. PARM officials said they were unaware of the inconsistency and confirmed that the IMS should provide the basis of APB schedule goals, as identified in DHS’s acquisition management instruction.

PARM officials also acknowledged that the information related to schedule development should be consistent across all of DHS’s policies, instructions, and guidebooks. Conflicting agency-wide policy and guidance can lead to a lack of clarity and consistency on how programs develop their schedules. In addition, the lack of a well-developed schedule can contribute to poor acquisition outcomes, such as increased costs and delayed delivery of capabilities needed by end users. As previously noted, DHS’s 2019 update to its acquisition management directive and associated instruction addressed a GAO recommendation

<sup>28</sup>Department of Homeland Security (DHS) Instruction 102-01-001, Rev. 01, Acquisition Management Instruction (Mar. 9, 2016); DHS Guidebook 102-01-103-01, Systems Engineering Life Cycle Guidebook (Apr. 18, 2016).

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related to better defining requirements before establishing acquisition program baselines.<sup>29</sup> PARM officials told us they plan to update the Systems Engineering Life Cycle Guidebook by the end of calendar year 2019 to account for the revisions in the acquisition management directive and associated instruction. At that time, they also plan to correct the inconsistency related to the documents used to develop APB schedule goals.

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## Conclusions

Since we began reviewing DHS's portfolio of major acquisitions in 2015, the department has strengthened implementation of its policies to improve acquisition oversight. These efforts have begun to yield better results as the performance of DHS's major acquisition portfolio has improved compared to our last review. As DHS major acquisition policy has evolved over time, the department has put in place oversight and approval processes that help ensure cost and performance goals are clear, consistent, and trace to key acquisition documents serving as the basis for those goals. However, opportunities remain for DHS to provide better oversight of major acquisition programs' schedule goals, as we found that these goals generally did not trace to the integrated master schedules per DHS policy. When schedule goals are not traceable, DHS decision makers cannot be sure that the schedule presented is consistent and accurate. Until DHS develops an oversight process to ensure schedules are developed and updated appropriately, the department cannot ensure that its most expensive acquisition programs are able to deliver capabilities needed by end users when promised. In addition, we found inconsistencies within DHS's major acquisition policy and system engineering guidance in identifying the basis of schedule goals. Without consistent schedule development guidance, DHS has no way of knowing that programs establish schedules in a consistent manner and in accordance with GAO's scheduling best practices.

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## Recommendations for Executive Action

We are making the following two recommendations to DHS.

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<sup>29</sup>[GAO-17-346SP](#).

The Secretary of Homeland Security should ensure that the Undersecretary for Management develops an oversight process to confirm that programs' schedule goals are developed and updated in accordance with GAO's Schedule Assessment Guide, to include ensuring traceability between APB schedule goals and IMSs. (Recommendation 1)

The Secretary of Homeland Security should ensure that the Undersecretary for Management revises the schedule development guidance in the Systems Engineering Life Cycle Guidebook to state clearly that an IMS should be used as the basis for APB schedule goals. (Recommendation 2)

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## Agency Comments

We provided a draft of this report to DHS for review and comment. DHS's comments are reproduced in appendix III. DHS also provided technical comments which we incorporated as appropriate. In its comments, DHS concurred with both of our recommendations and identified actions it planned to take to address them.

We are sending copies of this report to the appropriate congressional committees and the Acting Secretary of Homeland Security. In addition, the report is available at no charge on the GAO website at <http://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (202) 512-4841 or [makm@gao.gov](mailto:makm@gao.gov). Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix IV.



Marie A. Mak  
Director, Contracting and National Security Acquisitions

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*List of Committees*

The Honorable Ron Johnson  
Chairman  
The Honorable Gary Peters  
Ranking Member  
Committee on Homeland Security and Governmental Affairs  
United States Senate

The Honorable Shelley Moore Capito  
Chairwoman  
The Honorable Jon Tester  
Ranking Member  
Subcommittee on Homeland Security  
Committee on Appropriations  
United States Senate

The Honorable Bennie Thompson  
Chairman  
The Honorable Mike Rogers  
Ranking Member  
Committee on Homeland Security  
House of Representatives

The Honorable Lucille Roybal-Allard  
Chairwoman  
The Honorable Chuck Fleischmann  
Ranking Member  
Subcommittee on Homeland Security  
Committee on Appropriations  
House of Representatives

# Appendix I: Program Assessments

This appendix presents individual assessments for each of the 29 programs we reviewed. Each assessment presents information current as of August 2019. They include standard elements, such as an image, a program description, and summaries of the program's progress in meeting cost and schedule goals, performance and testing activities, and program management-related issues, such as staffing. The information presented in these assessments was obtained from the Department of Homeland Security (DHS) documentation, answers to our questionnaire by DHS officials, interviews with program officials, and includes our analysis of program information. Each assessment also includes the following figures:

- **Fiscal Years 2020–2024 Affordability.** This figure compares the funding plan presented in the Future Years Homeland Security Program report to Congress for fiscal years 2020-2024 to the program's current cost estimate. We use this funding plan because the data are approved by DHS and Office of Management and Budget, and was submitted to Congress to inform the fiscal year 2020 budget process. The data do not account for other potential funding sources, such as carryover funding.
- **Acquisition Program Baseline (APB) Thresholds vs. Current Estimate.** This figure compares the program's cost thresholds from the initial APB approved after DHS's acquisition management policy went into effect in November 2008 and the program's current DHS-approved APB to the program's expected costs as of August 2019. The source for the current estimate is the most recent cost data we obtained (i.e., a department-approved life-cycle cost estimate, updated life-cycle cost estimates submitted during the resource allocation process to inform the fiscal year 2020 budget request, or a fiscal year 2019 annual life-cycle cost estimate update).
- **Schedule Changes.** This figure consists of two timelines that identify key milestones for the program. The first timeline is based on the initial APB DHS leadership approved after the department's current acquisition management policy went into effect. The second timeline identifies when the program expected to reach its major milestones as of August 2019 and includes milestones introduced after the

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program's initial APB. Dates shown are based on the program's APB threshold dates or updates provided by the program office.

- Test Status. This table identifies key recent and upcoming test events. It also includes DHS's Director, Office of Test and Evaluation's assessment of programs' test results, if an assessment was conducted.
- Staffing Profile. This figure identifies the total number of staff a program needs (measured in full time equivalents) including how many are considered critical and how many staff the program actually has.

Lastly, each program assessment summarizes comments provided by the program office and identifies whether the program provided technical comments.

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## Appendix II: Objectives, Scope, and Methodology

The objectives of this audit were designed to provide congressional committees insight into the Department of Homeland Security's (DHS) major acquisition programs. We assessed the extent to which (1) DHS's major acquisition programs are on track to meet their schedule and cost goals and (2) current program baselines trace to key acquisition documents. To address these questions, we selected 29 of DHS's 80 major acquisition programs.<sup>1</sup> We selected all 17 of DHS's Level 1 acquisition programs—those with life-cycle cost estimates (LCCE) of \$1 billion or more—that had at least one project, increment, or segment in the Obtain phase—the stage in the acquisition life cycle when programs develop, test, and evaluate systems—at the initiation of our audit. Additionally, we reviewed 12 other major acquisition programs—including 6 Level 1 programs that either had not yet entered or were beyond the Obtain phase, and 6 Level 2 programs that have LCCEs between \$300 million and less than \$1 billion—that we identified were at risk of not meeting their cost estimates, schedules, or capability requirements based on our past work and discussions with DHS officials. Specifically, we met with representatives from DHS's Office of Program Accountability and Risk Management (PARM)—DHS's main body for acquisition oversight—as a part of our scoping effort to determine which programs (if any) were facing difficulties in meeting their cost estimates, schedules, or capability requirements. The 29 selected programs were sponsored by eight different components, and they are identified in table 8, along with our rationale for selecting them.

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<sup>1</sup>Our review included 27 of the 28 programs we reviewed in GAO, *Homeland Security Acquisitions: Leveraging Programs' Results Could Further DHS's Progress to Improve Portfolio Management*, [GAO-18-339SP](#) (Washington, D.C.: May 17, 2018). We did not include the ICE TECS Modernization program because it achieved full operational capability in August 2017 and ADE 3 in April 2018. We also did not include the Passenger Screening Program (PSP) because TSA divided the PSP projects into individual programs, two of which, Advanced Technology and Credential Authentication Technology, are included in this report.

**Appendix II: Objectives, Scope, and Methodology**

**Table 8: Rationale for Selecting DHS Major Acquisition Programs for Review**

Component	Program	Level 1 program in the Obtain phase at the initiation of our audit	At risk of not meeting cost estimates, schedule, or capability requirements
Customs and Border Protection	Automated Commercial Environment	yes	no
	Biometric Entry-Exit Program	yes	no
	Border Wall System Program	yes	no
	Cross-Border Tunnel Threat	no	yes
	Integrated Fixed Towers <sup>a</sup>	no	yes
	Medium Lift Helicopter (UH-60)	yes	no
	Multi-Role Enforcement Aircraft	yes	no
	Non-Intrusive Inspection Systems Program	no	yes
	Remote Video Surveillance System	yes	no
	Tactical Communications Modernization	no	yes
	TECS (not an acronym) Modernization <sup>a</sup>	no	yes
Cybersecurity and Infrastructure Security Agency	Continuous Diagnostics and Mitigation	yes	no
	National Cybersecurity Protection System	yes	no
	Next Generation Networks Priority Services <sup>a</sup>	no	yes
DHS Office of Biometric Identity Management	Homeland Advanced Recognition Technology	yes	no
Federal Emergency Management Agency	Logistics Supply Chain Management System <sup>a</sup>	no	yes
Science and Technology Directorate	National Bio and Agro-Defense Facility	yes	no
Transportation Security Administration	Advanced Technology Level 2 <sup>a</sup>	no	yes
	Credential Authentication Technology <sup>a</sup>	no	yes
	Electronic Baggage Screening Program	yes	no
	Technology Infrastructure Modernization	yes	no
U.S. Coast Guard	Fast Response Cutter	no	yes
	H-65 Conversion/Sustainment Program	yes	no
	Long Range Surveillance Aircraft (HC-130H/J)	no	yes
	Medium Range Surveillance Aircraft (HC-144A & C-27J)	yes	no
	National Security Cutter	no	yes
	Offshore Patrol Cutter	yes	no
	Polar Security Cutter	yes	no
U.S. Citizenship and Immigration Services	Transformation	yes	no

Legend: ● = yes; — = no; shaded rows = new program reviewed in 2019.

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Source: GAO analysis of Department of Homeland Security (DHS) data. | GAO-20-170SP

<sup>a</sup>Level 2 program.

To determine the extent to which DHS's major acquisition programs are on track to meet their schedule and cost goals, we collected key acquisition documentation for each of the 29 programs, such as all LCCEs and acquisition program baselines (APB) approved at the department level since DHS's current acquisition management policy went into effect in November 2008. DHS policy establishes that all major acquisition programs should have a department-approved APB, which establishes a program's critical cost, schedule, and performance parameters, before they initiate efforts to obtain new capabilities. Twenty-seven of the 29 programs had one or more department-approved LCCEs and APBs between November 2008 and August 31, 2019.<sup>2</sup> We used these APBs to establish the initial and current cost and schedule goals for the programs. We then developed a data collection instrument to help validate the information from the APBs and collect similar information from programs without department-approved APBs. Specifically, for each program, we pre-populated data collection instruments to the extent possible with the schedule and cost information we had obtained from the APBs and our prior assessments (if applicable) to identify schedule and cost goal changes, if any, since (a) the program's initial baseline was approved and (b) December 2017—the data cut-off date of our 2018 assessment. We shared our data collection instruments with officials from the program offices to confirm or correct our initial analysis and to collect additional information to enhance the timeliness and comprehensiveness of our data sets. We then met with program officials to identify causes and effects associated with any identified schedule and cost goal changes, including changes as a result of the fiscal year 2019 partial government shutdown. Subsequently, we drafted preliminary assessments for each of the 29 programs, shared them with program and component officials, and gave these officials an opportunity to submit comments to help us correct any inaccuracies, which we accounted for as appropriate (such as when new information was available).

Additionally, in July 2018 and July 2019, we obtained copies of the detailed data on affordability that programs submitted to inform the fiscal year 2019 and 2020 resource allocation processes. We also obtained

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<sup>2</sup>The remaining 2 programs—Cross-Border Tunnel Threat, and Remote Video Surveillance System—did not receive department approval of their initial APBs by August 31, 2019; therefore, we excluded them from our assessment of whether programs are on track to meet their schedule and cost goals during 2018.

copies of any annual LCCE updates programs submitted in fiscal years 2018 and 2019. For each of the 27 programs with a department-approved APB, we compared (a) the most recent cost data we collected (i.e., a department-approved LCCE, the detailed LCCE information submitted during the resource allocation process, an annual LCCE update, or an update provided by the program office) to (b) DHS's funding plan presented in the Future Years Homeland Security Program (FYHSP) report to Congress for fiscal years 2020-2024, which presents 5-year funding plans for DHS's major acquisition programs, to assess the extent to which a program was projected to have an acquisition funding gap.<sup>3</sup> These calculations also accounted for any funds that programs brought into fiscal year 2020 from sources, such as fiscal year 2019 carryover funds, programmed funds, and funding received above what was requested. We shared our analysis with officials from the program offices to confirm or correct our calculations. We also identified actions DHS had taken or planned to take to address projected program funding gaps by reviewing key documentation, such as certification of funds memorandums, submitted from January 2018 through August 2019. We also met with program officials to identify causes and effects associated with any projected funding gaps, and interviewed senior financial officials from DHS headquarters to discuss actions they had taken to implement our prior recommendations on addressing program affordability issues.<sup>4</sup> Through this process, we determined that our data elements were sufficiently reliable for the purpose of this engagement.

To determine the extent to which current program baselines trace to key acquisition documents, we reviewed DHS acquisition policy and supplemental guidance to identify documents that programs are required to complete prior to developing an APB and determine which documents are required to provide the basis for program's cost, schedule, and performance parameters. We also reviewed the policy and guidance to determine the roles and responsibilities of officials at DHS headquarters,

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<sup>3</sup>The FYHSP reports information by the department's new common appropriation structure, which created standard appropriation fund types including (1) procurement, construction, and improvements and (2) operations and support. We refer to these types of funding as (1) acquisition and (2) operations and maintenance throughout this report.

<sup>4</sup>For example, see GAO, *Homeland Security Acquisitions: DHS Has Strengthened Management, but Execution and Affordability Concerns Endure*, [GAO-16-338SP](#) (Washington, D.C.: Mar. 31, 2016), and *Homeland Security Acquisitions: DHS Could Better Manage Its Portfolio to Address Funding Gaps and Improve Communications with Congress*, [GAO-14-332](#) (Washington, D.C.: Apr. 17, 2014).

components, and programs in developing and reviewing acquisition documentation. Of the 27 programs we assessed with established baselines, 21 established or revised their APBs after DHS updated its acquisition management instruction in March 2016, which was the most current version of the guidance when we initiated our review. We reviewed each program's most recent APB to determine whether the APB referenced the documents that were used as the basis of its cost, schedule, and performance parameters. We asked program officials to provide the underlying documentation if the APB did not reference a document. We then compared the APB cost, schedule, and performance parameters to the information in the underlying documents. Specifically, we compared the approved LCCE to the APB objective and threshold cost values, the operational requirements document to the APB key performance parameters, and the integrated master schedule to the APB schedule goals. We determined that the cost and performance goals for a program were traceable if the information from the underlying documentation was the same as the cost and performance parameters in the APB. We determined that program schedule goals were traceable to the integrated master schedule, if all future baseline milestones identified in the APB were identified in the integrated master schedule. In addition, the milestone date from the integrated master schedule was within the range of the objective and threshold schedule goals identified in the APB. We did not include programs in our analysis with APBs approved before DHS updated its acquisition policy in March 2016 because they were developed under previous guidance when the requirements for developing APBs were different. We also did not include the APBs approved after DHS updated its acquisition policy in February 2019 because the update was not in place when we initiated this review.

In addition, we interviewed officials from headquarters organizations, including PARM, to discuss how policies related to developing APBs are being implemented and clarify requirements for establishing APB parameters. We interviewed component and program officials to identify causes of inconsistencies between the approved APB and documents that provided the basis for approved cost, schedule, and performance parameters.

We conducted this performance audit from April 2018 through December 2019 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe

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that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

# Appendix III: Comments from the Department of Homeland Security

U.S. Department of Homeland Security  
Washington, DC 20528



Homeland  
Security

December 5, 2019

Marie A. Mak  
Director, Contracting and National Security Acquisitions  
U.S. Government Accountability Office  
441 G Street, NW  
Washington, DC 20548

Re: Management Response to Draft Report, GAO-20-170SP, "HOMELAND  
SECURITY ACQUISITIONS: Outcomes Have Improved but Actions Needed to  
Enhance Oversight of Schedule Goals"

Dear Ms. Mak:

Thank you for the opportunity to review and comment on this draft report. The U.S. Department of Homeland Security (DHS) 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 acknowledgement that DHS strengthened implementation of its policies to improve acquisition outcomes and yield better results as the performance of its major acquisition portfolio improved. The Department is also appreciative of GAO's recognition that DHS put oversight and approval processes into place that help ensure cost and performance goals are clear, consistent, and traceable to key acquisition documents. DHS remains committed to ensuring programs develop and maintain schedules that support positive acquisition outcomes which fulfill the Homeland Security mission.

The draft report contained two recommendations with which the Department concurs. Attached find our detailed response to each recommendation. DHS previously submitted technical comments under a separate cover.

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 in the future.

Sincerely,



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

Attachment

**Attachment: Management Response to Recommendations Contained in  
GAO-20-170SP**

GAO recommended that the Secretary of Homeland Security should ensure that the Under Secretary for Management:

**Recommendation 1:** Develop an oversight process to confirm that programs' schedule goals are developed and updated in accordance with GAO's Schedule Assessment Guide, to include ensuring traceability between [Acquisition Program Baseline] APB schedule goals and [Integrated Master Schedules] IMSs.

**Response:** Concur. DHS agrees that oversight of the programs' scheduling process should ensure that schedule goals are developed and updated in accordance with GAO's Schedule Assessment Guide and traceable between the APB schedule goals and the IMS. The Management Directorate's Office of Program Accountability and Risk Management (PARM) developed an IMS checklist based on the GAO's Schedule Assessment Guide, as well as the Defense Contract Management Agency's 14-Point Assessment for Project Schedule Health. PARM is currently using this checklist to evaluate IMSs. Additionally, PARM is drafting accompanying guidance on schedules intended to assist the Component Acquisition Executives and acquisition program staff building the IMS and APBs. Estimated Completion Date (ECD): September 30, 2020.

**Recommendation 2:** Revise the schedule development guidance in the Systems Engineering Life Cycle Guidebook to state clearly that an IMS should be used as the basis for APB schedule goals.

**Response:** Concur. PARM agrees that the IMS should provide the basis of APB schedule goals, as identified in DHS Instruction 102-01-001, Revision 01, Acquisition Management Instruction; and that the guidance related to schedule development should be consistent across all of DHS's policies, instructions, and guidebooks. PARM is currently revising the Systems Engineering Life Cycle Guidebook and will clarify the language relating to schedules to ensure schedule guidance is consistent. ECD: March 31, 2020.

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## Text of Appendix III: Comments from the Department of Homeland Security

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Page 1

December 5, 2019

Marie A. Mak

Director, Contracting and National Security Acquisitions

U.S. Government Accountability Office 441 G Street, NW

Washington, DC 20548

Re: Management Response to Draft Report, GAO-20-170SP, "HOMELAND SECURITY ACQUISITIONS: Outcomes Have Improved but Actions Needed to Enhance Oversight of Schedule Goals"

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## Page 2

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Sincerely,

JIM H. CRUMPACKER, CIA, CFE

Director

Departmental GAO-OIG Liaison Office

Attachment

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## Page 3

### Attachment: Management Response to Recommendations Contained in GAO-20-170SP

GAO recommended that the Secretary of Homeland Security should ensure that the Under Secretary for Management:

*Recommendation 1:*

Develop an oversight process to confirm that programs' schedule goals are developed and updated in accordance with GAO's Schedule Assessment Guide, to include ensuring traceability between [Acquisition Program Baseline] APB schedule goals and [Integrated Master Schedules] IMSs.

*Response: Concur.*

DHS agrees that oversight of the programs' scheduling process should ensure that schedule goals are developed and updated in accordance with GAO's Schedule Assessment Guide and traceable between the APB schedule goals and the IMS. The Management Directorate's Office of Program Accountability and Risk Management (PARM) developed an IMS checklist based on the GAO's Schedule Assessment Guide, as well as the Defense Contract Management Agency's 14-Point Assessment for Project Schedule Health. PARM is currently using this checklist to evaluate IMSs. Additionally, PARM is drafting accompanying guidance on schedules intended to assist the Component Acquisition Executives and acquisition program staff building the IMS and APBs. Estimated Completion Date (ECD): September 30, 2020.

*Recommendation 2:*

Revise the schedule development guidance in the Systems Engineering Life Cycle Guidebook to state clearly that an IMS should be used as the basis for APB schedule goals.

*Response: Concur.*

PARM agrees that the IMS should provide the basis of APB schedule goals, as identified in OHS Instruction I 02-01-001, Revision O I , Acquisition Management Instruction; and that the guidance related to schedule development should be consistent across all of OHS's policies, instructions, and guidebooks. PARM is currently revising the Systems Engineering Life Cycle Guidebook and will clarify the language relating to schedules to ensure schedule guidance is consistent. ECO:

March 31, 2020.

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# Appendix IV: GAO Contact and Staff Acknowledgments

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## GAO Contact

Marie A. Mak, (202) 512-4841 or [makm@gao.gov](mailto:makm@gao.gov)

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## Staff Acknowledgments

In addition to the contact listed above, Rick Cederholm (Assistant Director), Alexis Olson (Analyst-in-Charge), Whitney Allen, Leigh Ann Haydon, Khaki LaRiviere, Sarah Martin, and Kelsey Wilson made key contributions to this report. Other contributors included Mathew Bader, Andrew Burton, Erin Butkowski, John Crawford, Aryn Ehlow, Lorraine Ettaro, Laurier R. Fish, Alexandra Gebhard, Elizabeth Hosler-Gregory, Stephanie Gustafson, Jason Lee, Claire Li, Ashley Rawson, Jillian Schofield, Roxanna Sun, Anne Louise Taylor, and Lindsay Taylor.

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## Related GAO Products

*Homeland Security Acquisitions: Opportunities Exist to Further Improve DHS's Oversight of Test and Evaluation Activities.* GAO-20-20. Washington, D.C.: October 24, 2019

*High-Risk Series: Substantial Efforts Needed to Achieve Greater Progress on High-Risk Areas.* [GAO-19-157SP](#). Washington, D.C.: March 6, 2019.

*Coast Guard Acquisitions: Polar Icebreaker Program Needs to Address Risks before Committing Resources.* [GAO-18-600](#). Washington, D.C.: September 4, 2018.

*DHS Acquisitions: Additional Practices Could Help Components Better Develop Operational Requirements.* [GAO-18-550](#). Washington, D.C.: August 8, 2018.

*Southwest Border Security: CBP Is Evaluating Designs and Locations for Border Barriers but Is Proceeding Without Key Information.* [GAO-18-614](#). Washington, D.C.: July 30, 2018.

*Coast Guard Acquisitions: Actions Needed to Address Longstanding Portfolio Management Challenges.* [GAO-18-454](#). Washington, D.C.: July 24, 2018.

*Homeland Security Acquisitions: Leveraging Programs' Results Could Further DHS's Progress to Improve Portfolio Management.* [GAO-18-339SP](#). Washington, D.C.: May 17, 2018.

*DHS Program Costs: Reporting Program-Level Operations and Support Costs to Congress Would Improve Oversight.* [GAO-18-344](#). Washington, D.C.: April 25, 2018.

*Border Security: Additional Actions Could Strengthen DHS Efforts to Address Subterranean, Aerial, and Maritime Smuggling.* [GAO-17-474](#). Washington, D.C.: May 1, 2017.

*Homeland Security Acquisitions: Identifying All Non-Major Acquisitions Would Advance Ongoing Efforts to Improve Management,* [GAO-17-396](#). Washington, D.C.: April 13, 2017.

*Homeland Security Acquisitions: Earlier Requirements Definition and Clear Documentation of Key Decisions Could Facilitate Ongoing Progress.* [GAO-17-346SP](#). Washington, D.C.: April 6, 2017.

*Homeland Security Acquisitions: Joint Requirements Council's Initial Approach Is Generally Sound and It Is Developing a Process to Inform Investment Priorities.* [GAO-17-171](#). Washington, D.C.: October 24, 2016.

*Homeland Security Acquisitions: DHS Has Strengthened Management, but Execution and Affordability Concerns Endure.* [GAO-16-338SP](#). Washington, D.C.: March 31, 2016.

*Homeland Security Acquisitions: Major Program Assessments Reveal Actions Needed to Improve Accountability.* [GAO-15-171SP](#). Washington, D.C.: April 22, 2015.

*Homeland Security Acquisitions: DHS Should Better Define Oversight Roles and Improve Program Reporting to Congress.* [GAO-15-292](#). Washington, D.C.: March 12, 2015.

*Homeland Security Acquisitions: DHS Could Better Manage Its Portfolio to Address Funding Gaps and Improve Communications with Congress.* [GAO-14-332](#). Washington, D.C.: April 17, 2014.

*Homeland Security: DHS Requires More Disciplined Investment Management to Help Meet Mission Needs.* [GAO-12-833](#). Washington, D.C.: September 18, 2012.

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Contact FraudNet:

Website: <https://www.gao.gov/fraudnet/fraudnet.htm>

Automated answering system: (800) 424-5454 or (202) 512-7700

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## Congressional Relations

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

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## Public Affairs

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

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## Strategic Planning and External Liaison

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



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