



March 2022

DHS ANNUAL ASSESSMENT

Most Acquisition
Programs Are Meeting
Goals Even with
Some Management
Issues and COVID-19
Delays

Accessible Version

Highlights of [GAO-22-104684](#)

DHS Annual Assessment

Most Acquisition Programs Are Meeting Goals Even with Some Management Issues and COVID-19 Delays



National Security Cutter



Border Wall System Program



Medium Lift Helicopter

Source: (left to right): U.S. Coast Guard; U.S. Army Corps of Engineers, Defense Visual Information Distribution Service; and Customs and Border Protection. | GAO-22-104684

Why GAO Did This Study

In 2015, a Senate report included a provision for GAO to review DHS's major acquisitions. This is GAO's seventh review of the cost and schedule performance of selected major DHS acquisition programs. This report examines the extent to which these programs are meeting baseline goals and describes efforts to mitigate COVID-19-related effects on delivery of capabilities to end users.

GAO assessed 29 acquisition programs, including DHS's largest programs and those that GAO identified as at risk of poor outcomes, to determine program status as of September 30, 2021. GAO assessed progress in meeting cost and schedule goals; reviewed policy, memorandums, and information about the cost and schedule effects of COVID-19; and interviewed DHS officials.

What GAO Found

The Department of Homeland Security (DHS) invests billions of dollars annually to acquire systems that help secure the border, increase marine safety, screen travelers, enhance cybersecurity, improve disaster response, and execute a wide variety of other operations.

As of September 2021, 23 of the 29 programs GAO selected for this review had developed a DHS-approved acquisition program baseline—establishing how the system being acquired will perform, when it will be delivered, and what it will cost—and 20 of those 23 programs were meeting their goals. However, five programs exceeded their cost or schedule goals, or both, at some point during fiscal year 2021. Reasons for the breaches included external factors, such as COVID-19, and an underestimation of program complexity. While two of these five programs restructured their baseline goals to get back on track, the remaining three were still in breach status as of September 2021 (see table).

DHS Major Acquisition Programs in Breach of Approved Cost or Schedule Goals (or both) as of September 2021

Program (baseline life-cycle cost)	Breach type
Homeland Advanced Recognition Technology (\$3.9 billion)	Cost and schedule
Medium Range Surveillance Aircraft (\$15.2 billion)	Schedule
National Bio and Agro-Defense Facility (\$1.3 billion)	Schedule

Source: GAO analysis of Department of Homeland Security data | GAO-22-104684

Additionally, GAO found that nine programs that were meeting their currently established goals rebaselined or were in the process of doing so in fiscal year 2021 due to scope changes, such as a change in quantities, an extended life cycle, or additional funding from Congress.

As of September 2021, GAO found that four programs used a DHS policy allowing programs to adjust schedule milestones up to 6 months due to the effects of COVID-19. These effects included workforce absences due to stay-at-home orders and supply chain delays for needed parts. In most cases, programs were able to mitigate the effects of COVID-19 without baseline adjustments.

View [GAO-22-104684](#). For more information, contact Marie A. Mak at (202) 512-4841 or makm@gao.gov.

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Abbreviations

ADE	acquisition decision event
APB	acquisition program baseline
AoA	analysis of alternatives
COVID-19	Coronavirus Disease 2019
DHS	Department of Homeland Security
DOT&E	Director, Office of Test and Evaluation
JRC	Joint Requirements Council
KPP	key performance parameter
LCCE	life-cycle cost estimate
O&S	operations and support
PARM	Office of Program Accountability and Risk Management
PC&I	procurement, construction, and improvements
TEMP	test and evaluation master plan

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March 8, 2022

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. DHS and its 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. In fiscal year 2022 alone, DHS plans to spend over \$5 billion on these acquisition programs, and, ultimately, the department plans to invest more than \$240 billion over the life cycle of these programs. Most of DHS's major acquisition programs have life-cycle costs of at least \$300 million and take multiple years to acquire.¹

To help manage these programs, DHS established an acquisition management policy in 2008, and department leadership has dedicated resources and implemented additional guidance designed to improve acquisition oversight. We have found the policy to be generally sound in that it reflects key program management practices identified in our prior work. However, we have found shortfalls in executing the policy. Furthermore, we have highlighted DHS acquisition management issues in our high-risk updates since 2005 and made numerous recommendations over the past decade to help address these challenges.²

DHS has made progress in responding to some of these recommendations but has not fully addressed all of them. For example, in October 2020, we recommended that DHS should ensure the Office of Program Accountability and Risk Management (PARM) and component heads implement the nomination process for Component Acquisition

¹DHS 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 as a major acquisition if it has significant strategic or policy implications for homeland security, among other things.

²GAO, *Homeland Security: DHS Requires More Disciplined Investment Management to Help Meet Mission Needs*, [GAO-12-833](#) (Washington, D.C.: Sept. 18, 2012); and *High-Risk Series: An Update*, [GAO-05-207](#) (Washington, D.C.: Jan. 1, 2005). For our most recent report, see *High-Risk Series: Dedicated Leadership Needed to Address Limited Progress in Most High-Risk Areas*, [GAO-21-119SP](#) (Washington, D.C.: Mar. 2, 2021).

Executives consistently as described in DHS guidance.³ Although DHS concurred with our recommendation and has taken steps to address it, the department is still in the process of formally documenting its actions. Additionally, in December 2019, we found that major acquisition programs' schedule goals did not trace to the integrated master schedules in accordance with DHS guidance.⁴ We recommended that DHS revise the schedule development guidance and create an oversight process to confirm that programs' schedule goals are developed and updated to ensure traceability between acquisition program baseline (APB) schedule goals and integrated master schedules in accordance with GAO's Schedule Assessment Guide.⁵ In response to our recommendation, DHS published a revised version of its Systems Engineering Life Cycle instruction and the accompanying guidebook in February 2021 and May 2021, respectively. However, as of September 2021, DHS had not completed efforts to create an oversight process.

The Explanatory Statement accompanying a bill to the DHS Appropriations Act, 2015 contained a provision for GAO to conduct reviews of major DHS acquisition programs, as directed in the Senate report.⁶ This is our seventh such review. This report (1) examines the extent to which selected DHS major acquisition programs are meeting their baseline goals and (2) describes the programs' efforts to mitigate Coronavirus Disease 2019 (COVID-19)-related cost and schedule effects.

To answer these objectives, we reviewed 29 of DHS's 37 major acquisition programs identified in the department's January 2021 Master Acquisition Oversight List. DHS defines major acquisitions as level 1 for programs with life-cycle cost estimates (LCCE) of \$1 billion or more and level 2 as programs with LCCEs from \$300 million to less than \$1 billion. We selected 13 of DHS's 14 level 1 acquisition programs, as of January 2021, that were in the process of obtaining new capabilities—which DHS

³GAO, *Homeland Security Acquisitions: DHS Has Opportunities to Improve Its Component Acquisition Oversight*, [GAO-21-77](#) (Washington, D.C.: Oct. 20, 2020).

⁴GAO, *Homeland Security Acquisitions: Outcomes Have Improved but Actions Needed to Enhance Oversight of Schedule Goals*, [GAO-20-170SP](#) (Washington, D.C.: Dec. 19, 2019).

⁵GAO, *Schedule Assessment Guide: Best Practices for Project Schedules*, [GAO-16-89G](#) (Washington, D.C.: Dec. 22, 2015).

⁶Explanatory 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, (161 Cong. Rec., H-276 (Jan. 13, 2015)).

policy defines as the obtain phase of the acquisition life cycle. We selected 16 other major acquisition programs that we identified as at risk of not meeting their schedules, cost estimates, or capability requirements. These include two level 2 acquisitions in the obtain phase and 14 level 1 or level 2 programs that had not yet entered or were beyond the obtain phase. We excluded eight major acquisition programs for a variety of reasons, including lower risk programs already in deployment and to avoid duplication with other ongoing GAO reviews.

To determine the extent to which the 29 programs we selected were meeting their schedule and cost goals, we collected key acquisition documentation, such as APBs, which contain information on programs' schedules and costs. Since the November 2008 update to DHS's overarching acquisition management directive, these documents have required DHS-level approval; therefore, consistent with our prior assessments, we used November 2008 as the starting point for our analysis. We found that 24 of the 29 programs had one or more department-approved APBs between November 2008 and September 30, 2021. The remaining five programs do not yet have department-approved APBs, and, as a result, we excluded them from our portfolio analysis. We also excluded the Border Wall System Program from the aggregated analyses due to the January 2021 Presidential Proclamation directing a pause in the construction of the border wall to the extent permitted by law.⁷ However, all 29 programs received individual assessments, as discussed below.

To determine the programs' efforts to mitigate COVID-19–related cost and schedule effects, we first reviewed the October 2020 DHS memorandum granting level 1 and selected level 2 programs the authority to adjust their APB schedule baseline goals up to 6 months due to effects related to COVID-19. We then reviewed baseline adjustment memos associated with programs that made use of this authority. We also interviewed officials at the programs that were associated with these adjustment memos and at those that were not to understand the cost and schedule effects they had seen as a result of COVID-19 and the steps they had taken to attempt to mitigate these effects.

Appendix I presents individual assessments of and information about each of the 29 programs we reviewed, including the six excluded from our

⁷GAO, *Southwest Border: Schedule Considerations Drove Army Corps of Engineers' Approaches to Awarding Construction Contracts through 2020*, [GAO-21-372](#) (Washington, D.C.: June 17, 2021).

portfolio analysis. These assessments include key information such as the status of programs' schedules, costs, and test and evaluation. Our two-page assessments are intended to provide decision makers a means to quickly gauge the programs' progress and the extent to which they face any cost, schedule, performance, or program risks. See table 1 for the full list of programs we reviewed.

Table 1: DHS Major Acquisition Programs Selected for Review

Component	Program	Acquisition level
Cybersecurity and Infrastructure Security Agency	Continuous Diagnostics and Mitigation	1
Cybersecurity and Infrastructure Security Agency	National Cybersecurity Protection System	1
Cybersecurity and Infrastructure Security Agency	Next Generation Networks - Priority Services Phase 1	2
Cybersecurity and Infrastructure Security Agency	Next Generation Networks - Priority Services Phase 2	2
DHS Management Directorate	Homeland Advanced Recognition Technology	1
Federal Emergency Management Agency	Grants Management Modernization	2
Science and Technology Directorate	National Bio and Agro-Defense Facility	1
Transportation Security Administration	Checkpoint Property Screening System	1
	Credential Authentication Technology	2
U.S. Coast Guard	270' Medium Endurance Cutter Service Life Extension Program	1
U.S. Coast Guard	Fast Response Cutter	1
U.S. Coast Guard	H-65 Conversion/Sustainment Program	1
U.S. Coast Guard	Long Range Surveillance Aircraft (HC-130J)	1
U.S. Coast Guard	Medium Range Recovery Helicopter (MH-60T)	1
U.S. Coast Guard	Medium Range Surveillance Aircraft	1
U.S. Coast Guard	National Security Cutter	1
U.S. Coast Guard	Offshore Patrol Cutter	1
U.S. Coast Guard	Polar Security Cutter	1
U.S. Coast Guard	Waterways Commerce Cutter	1
U.S. Customs and Border Protection	Automated Commercial Environment	1
U.S. Customs and Border Protection	Biometric Entry-Exit Program	1
U.S. Customs and Border Protection	Border Wall System Program	1
U.S. Customs and Border Protection	Cross Border Tunnel Threat	1
U.S. Customs and Border Protection	Integrated Fixed Towers	2
U.S. Customs and Border Protection	Medium Lift Helicopter	1
U.S. Customs and Border Protection	Multi-Role Enforcement Aircraft	1

Component	Program	Acquisition level
U.S. Customs and Border Protection	Non-Intrusive Inspection Systems	1
U.S. Customs and Border Protection	Non-Intrusive Inspection Integration	1
U.S. Customs and Border Protection	Remote Video Surveillance System	1

Legend: shaded rows = the program has not yet established an acquisition program baseline approved by DHS leadership.

Source: GAO analysis of Department of Homeland Security (DHS) data. | GAO-22-104684

Appendix II provides detailed information on our objectives, scope, and methodology.

We conducted this performance audit from December 2020 to March 2022 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

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.

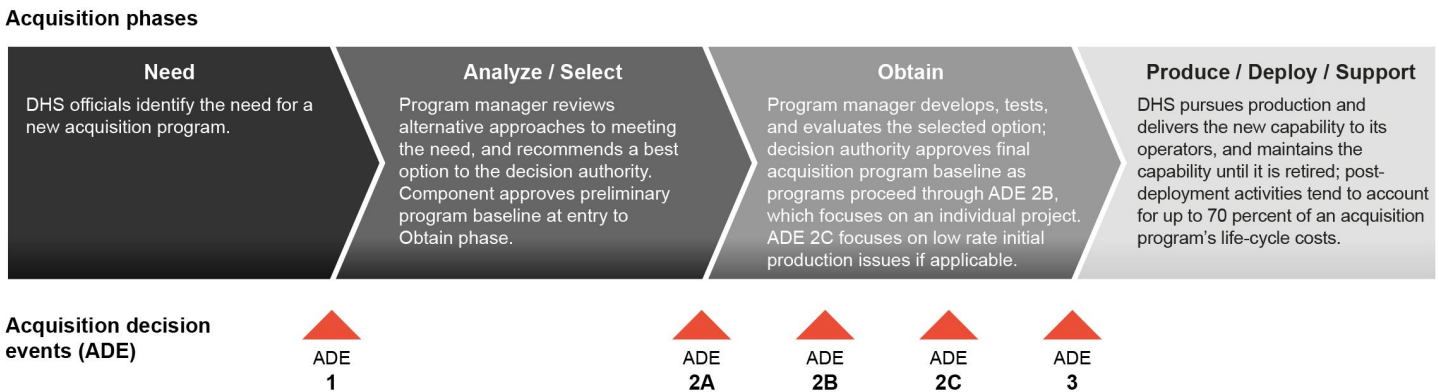
Acquisition Management Policy and Oversight

DHS's 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 our recommendations. DHS issued the current version of the directive in February 2019 and the current version of the instruction in January 2021.

The Under Secretary for Management is the acquisition decision authority for the department’s largest acquisition programs, those with LCCEs of \$1 billion or greater, as well as some programs with cost estimates between \$300 million and \$1 billion. Component Acquisition Executives—typically the most senior acquisition management official within each DHS component—may be delegated acquisition decision authority for programs with cost estimates between \$300 million and \$1 billion.

DHS acquisition management policy establishes that a major acquisition program’s acquisition 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. The 2019 revision to the DHS acquisition management policy modified entrance criteria for ADEs. For example, the revised policy requires acquisition decision authority approval of APBs by ADE 2B. Under a prior version of the policy, acquisition decision authority approval of the APB occurred at ADE 2A. Figure 1 reflects the current acquisition life cycle in DHS acquisition management policy.

Figure 1: DHS Acquisition Life Cycle for Major Acquisition Programs



Source: GAO analysis of Department of Homeland Security (DHS) data. | GAO-22-104046

Note: Programs may develop capabilities through individual projects, segments, or increments, which are approved at 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.

An important aspect of an ADE is the acquisition 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

January 2021 acquisition instruction that requires department-level approval for major acquisitions of capital assets.

Table 2: Selected Documents Approved by DHS Headquarters at Acquisition Decision Events (ADE) For Major Acquisitions of Capital Assets

Category	Category description
Acquisition Program Baseline (ADE 2B, 2C, 3)	<ul style="list-style-type: none"> Establishes a program's critical baseline cost, schedule, and performance parameters Expresses the parameters in measurable, quantitative terms, which must be met in order to accomplish the program's goals
Analysis of Alternatives (AoA) Study Plan (ADE 2A)	<ul style="list-style-type: none"> Sets assumptions, scope, and constraints for the AoA, which is an analytical comparison of selected solution alternatives to fulfill a capability gap or need
Capability Development Plan (ADE 1)	<ul style="list-style-type: none"> 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
Integrated Logistics Support Plan (ADE 2B, 2C, 3)	<ul style="list-style-type: none"> Defines the strategy for ensuring the supportability and sustainment of a future capability Provides critical insight into the approach, schedule, and funding requirements for integrating supportability requirements into the systems engineering process
Life-Cycle Cost Estimate (ADE 2A, 2B, 2C, 3)	<ul style="list-style-type: none"> Provides an exhaustive and structured accounting of all resources and associated cost elements required to develop, produce, deploy, and sustain a particular program
Mission Need Statement (ADE 1)	<ul style="list-style-type: none"> Synopsizes at a high-level the specific capabilities required to accomplish DHS's mission objectives, along with deficiencies and gaps in these capabilities
Operational Requirements Document (ADE 2A)	<ul style="list-style-type: none"> Captures the business or operational user requirements and identifies which of these requirements are key performance parameters Describes the mission, objectives, and capabilities in operationally relevant terms
System Engineering Life Cycle Tailoring Plan (ADE 2A, 2B, 2C, 3)	<ul style="list-style-type: none"> Tailors the phases, products, and reviews in the System Engineering Life Cycle to meet the specific needs of each program and project
Technical Assessment (ADE 2A)	<ul style="list-style-type: none"> Provides relevant information on the technical maturity, manufacturing capability, and technical risk of a planned technology
Test and Evaluation Master Plan (ADE 2A, 2C)	<ul style="list-style-type: none"> Documents the overarching test and evaluation approach for the acquisition program Describes the developmental and operational test and evaluation needed to determine a system's technical performance and operational effectiveness/suitability/resilience

Source: GAO analysis of Department of Homeland Security (DHS) information. | GAO-22-104684

DHS acquisition management policy states that the APB is the agreement between the acquisition program, component, and department-level officials that establishes 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 (KPP). DHS requirements policy describes KPPs as a program's most important and nonnegotiable requirements that a system

must meet to fulfill its fundamental purpose. For example, a KPP for an aircraft may be airspeed, and a KPP for a surveillance system may be detection range.

In a 2019 revision to DHS's acquisition policy, DHS modified the way in which APBs for major acquisition programs are developed and approved. Specifically, the policy now states that a preliminary APB—approved by Component Acquisition Executives—is required at ADE 2A. The preliminary APB is updated, as necessary, and submitted to the acquisition decision authority for approval to support ADE 2B. By contrast, the prior version of the acquisition policy required the acquisition decision authority to approve an initial APB at ADE 2A. Obtaining acquisition decision authority approval of the APB later in the acquisition life cycle allows programs to better define technical requirements prior to approval.

The APB establishes objective (target) and threshold (maximum acceptable for cost, latest acceptable for schedule, and minimum or maximum 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 status are required to notify their acquisition decision authority and develop a remediation plan that outlines a time frame for the program to return to its APB parameters, rebaseline—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 members and representatives who manage DHS's mission objectives, resources, and contracts.
- **The Line of Business Chiefs** include the DHS Chief Financial Officer, the Chief Information Officer, the Chief Procurement Officer, the Chief Human Capital Officer, the Chief Security Officer, and the Chief Readiness Support Officer, among others. The Line of Business Chiefs have responsibility for executing acquisition portfolios and are responsible and accountable for adhering to the department's acquisition policies and procedures to ensure sound management,

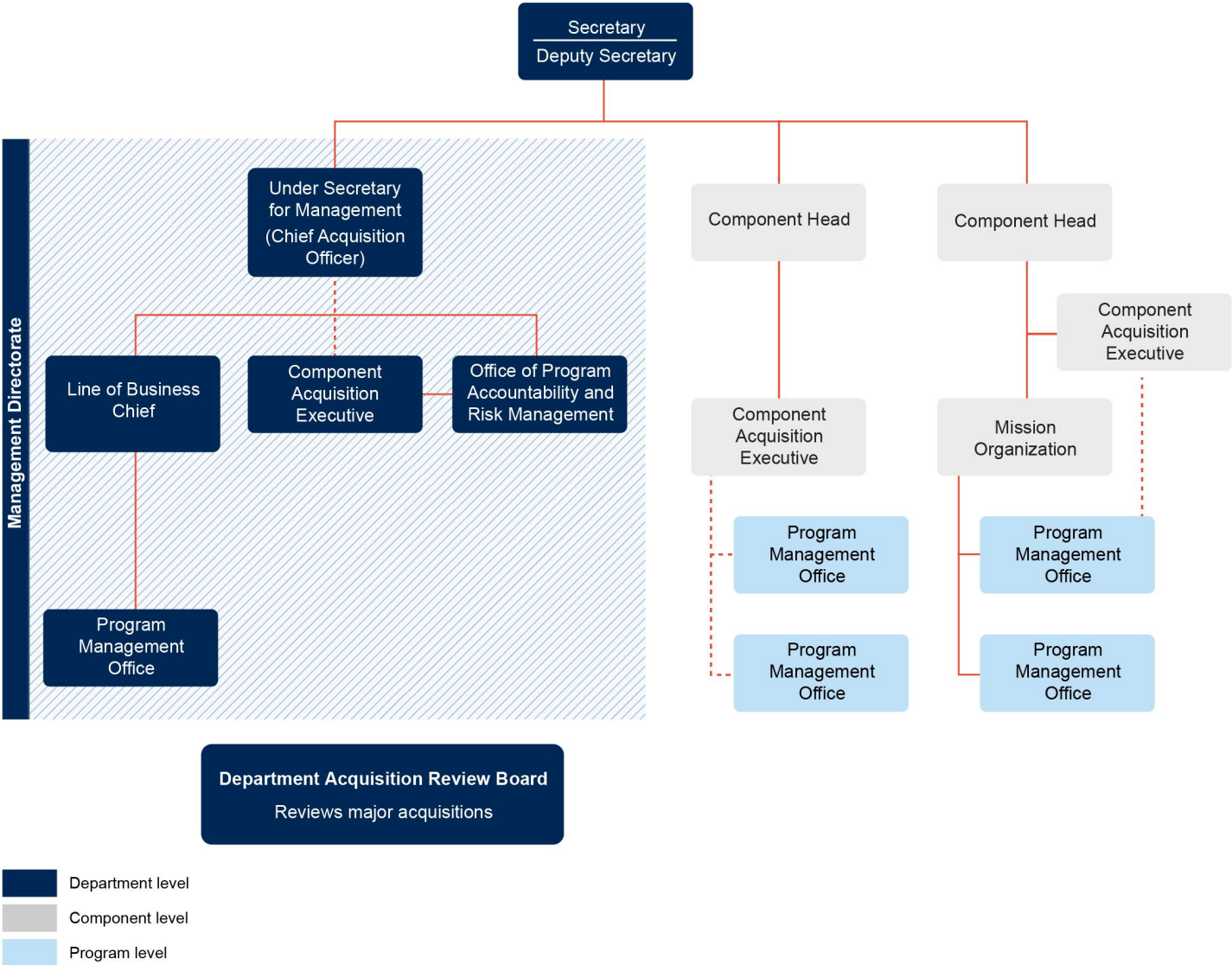
review, support, and approval. The Line of Business Chiefs are also members of the Acquisition Review Board.

- **The Office of Program Accountability and Risk Management** 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 acquisition program management policies and procedures, reviews major programs, provides guidance for workforce planning activities, and provides support to program managers.
- **Components**, such as U.S. Customs and Border Protection (CBP), the Transportation Security Administration, and the U.S. Coast Guard sponsor specific acquisition programs.⁸ 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. In July 2021, DHS established a Component Acquisition Executive position within the Management Directorate. According to officials, this position is to oversee acquisition programs being executed within the Lines of Business.
 - **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 program managers at the department, component, and program level.

⁸DHS'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. For example, the Management Directorate is a support component that generally provides assistance and guidance to other DHS components and external organizations and includes functions like budget, finance, information technology, facilities, human capital, and acquisitions. However, the Management Directorate also manages acquisition programs. Typically, these programs are those that involve multiple components, such as programs related to relocating the DHS headquarters and updates to financial systems for multiple components.

Figure 2: Department of Homeland Security’s Acquisition Management Structure



Source: GAO analysis of Department of Homeland Security information. | GAO-22-104684

Requirements Development Process

In 2008, 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.⁹ In June 2014, DHS reestablished 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 to help ensure that DHS uses its finite investment resources wisely.¹⁰ We will continue to monitor the JRC's efforts through GAO's high-risk work.

Test and Evaluation Policy

In October 2020, DHS issued a revision to the policy that describes processes for test and evaluation of the capabilities delivered by the department's major acquisition programs. 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 programs' test and evaluation activities in the individual program assessments presented in appendix I, as appropriate.

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

- Program managers have overall responsibility for planning and executing their programs' test and evaluation strategies, including scheduling and funding test and evaluation activities and delivering systems for testing. The program manager is also responsible for

⁹GAO, *Department of Homeland Security: Billions Invested in Major Programs Lack Appropriate Oversight*, [GAO-09-29](#) (Washington, D.C.: Nov. 18, 2008). 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).

¹⁰[GAO-19-157SP](#).

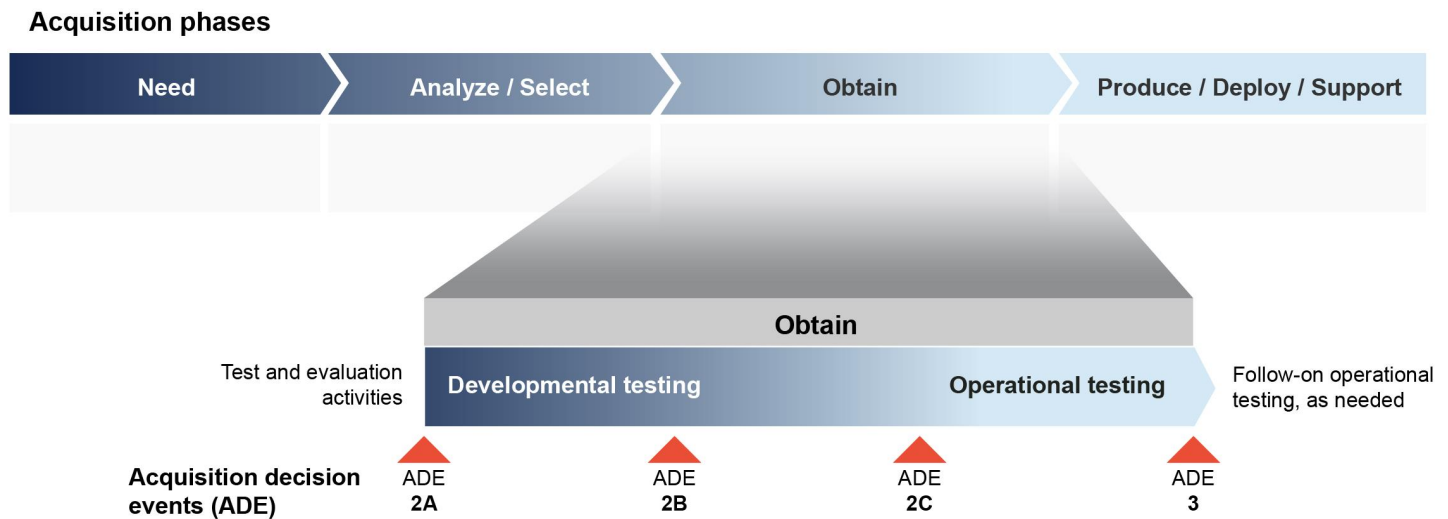
developing and documenting the program's strategy for test and evaluation in a test and evaluation master plan (TEMP). A program's TEMP must describe the developmental and operational test and evaluation needed to determine technical performance and operational effectiveness, suitability, and resilience.¹¹

- Independent test agents (formerly known as operational test agents) are responsible for planning, conducting, analyzing, assessing, and reporting on test and evaluation to identify whether a system can meet its key performance parameters and provide an evaluation of the operational effectiveness, suitability, and resilience 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 resilience refers to the degree to which a system is able to withstand and recover from disruption, including cyber resilience. The independent test agents may be organic to the component, another government agency, or a contractor, but must be independent of the program manager, end user, and developer.
- The Director, Office of Test and Evaluation (DOT&E) is responsible for approving major acquisition programs' independent test agents, operational test and evaluation plans and TEMPs. As appropriate, the Director is also responsible for overseeing operational test and evaluation, reviewing independent test agents' reports, and assessing the reports. Prior to a program's ADE 2C, ADE 3, and other ADEs, as appropriate, the Director provides the program's acquisition decision authority a letter of assessment that includes an assessment of the adequacy of the test event, an independent evaluation of operational effectiveness, suitability, resilience and any further independent analysis.

As an acquisition program proceeds through its life cycle, the testing emphasis moves gradually from developmental test and evaluation to operational test and evaluation. In addition to operational test and evaluation, programs must complete an assessment of cyber resilience to inform ADE 3. See figure 3.

¹¹DHS most recently updated the acquisition management instruction (DHS Instruction 102-01-001) in January 2021 and updated its test and evaluation instruction in October 2020. These instructions require the Test and Evaluation Master Plan as of ADE 2A. Previously, it was required at ADE 2B.

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



Source: GAO analysis of Department of Homeland Security (DHS) documents. | GAO-22-104684

In our October 2019 report on DHS test and evaluation activities for major programs, we reported that cyberattacks have the potential to prevent systems from working when needed, which could lead to an inability for end users to complete missions or even loss of life.¹² We also found that program compliance with DHS's cybersecurity testing requirements had been slow, in part because of the time needed to adequately plan and coordinate test and evaluation. DHS Instruction 102-01-012, issued in July 2020, states that cybersecurity and cyber resilience analyses are required for level 1 and level 2 major acquisition programs throughout the acquisition life cycle.

In our last review of DHS major programs, we reported that officials from DHS's Test and Evaluation Division stated that they are taking steps to help ensure that programs' plans to assess cyber resilience are incorporated earlier in the acquisition life cycle so test and evaluation can be completed as part of operational test and evaluation and inform ADE 3. For example, DOT&E stated that as programs update TEMPs, a plan to assess cyber resilience must be included in order to obtain approval.

¹²GAO, *Homeland Security Acquisitions: Opportunities Exist to Further Improve DHS's Oversight of Test and Evaluation Activities*, [GAO-20-20](#) (Washington D.C.: Oct. 24, 2019).

DHS COVID-19 Policy Adjustment

Since the declaration of COVID-19 as a national emergency on March 13, 2020, many government agencies and contractors have implemented changes to curb the spread of the virus. For some DHS major acquisitions, the pandemic or changes implemented to address it have affected workforce availability for efforts, such as construction or test and evaluation. In October 2020, DHS's Deputy Under Secretary for Management issued a memorandum that granted Component Acquisition Executives the ability to adjust their APB schedule goals for level 1 and selected level 2 programs up to 6 months or longer due to effects related to COVID-19 instead of going through a formal rebaseline. Component Acquisition Executives must also notify DHS's Cost Analysis Division of any cost baseline adjustments needed for non-delegated major acquisition programs experiencing schedule delays as a result of COVID-19.

Majority of Selected Programs Were Meeting Established Goals in Fiscal Year 2021, with Fewer in Breach Status than Prior Year

Of the 23 programs we assessed with department-approved APBs, 20 were meeting their most recent cost and schedule baseline goals as of September 2021. A total of five programs were in breach of their cost or schedule goals at some point during fiscal year 2021, but two exited breach status during our review. Breaches were due to factors external to the program, such as COVID-19-related labor and supply chain issues, and internal program factors, such as an underestimation of program complexity. Additionally, nine other programs, though not experiencing a breach of cost or schedule baselines, rebaselined or were in the process of rebaselining during fiscal year 2021 due to a variety of factors. These included a change in quantities and an extension of the program schedule to enhance capabilities. We found that programs are generally meeting performance goals and conducting some operational test and evaluation as well as planning or conducting some cybersecurity testing.

Twenty of 23 Programs Were Meeting Established Cost and Schedule Goals in Fiscal Year 2021

We found that 20 out of 23 programs we reviewed with department-approved APBs were meeting their current baseline cost and schedule goals during fiscal year 2021.¹³ The remaining three programs were not meeting their baseline goals at the end of fiscal year 2021 and were in the process of revising their baselines or planned to revise their baselines. See table 3 for the status of each of the 23 programs we assessed as of September 2021.

¹³Programs are required to have a department-approved APB by ADE 2B. Programs without department-approved APBs were excluded from this analysis. See appendix I for additional information on each program.

Table 3: Department of Homeland Security Program Status as of September 2021

Meeting baseline goals	Not meeting baseline goals
Cybersecurity and Infrastructure Security Agency <ul style="list-style-type: none"> Continuous Diagnostics and Mitigation National Cybersecurity Protection System Next Generation Network - Priority Services Phase 1 Federal Emergency Management Agency <ul style="list-style-type: none"> Grants Management Modernization Transportation Security Administration <ul style="list-style-type: none"> Checkpoint Property Screening System Credential Authentication Technology U.S. Coast Guard <ul style="list-style-type: none"> 270' Medium Endurance Cutter Service Life Extension Program Fast Response Cutter H-65 Conversion/Sustainment Program Long Range Surveillance Aircraft (HC-130J) National Security Cutter Offshore Patrol Cutter Polar Security Cutter U.S. Customs and Border Protection <ul style="list-style-type: none"> Automated Commercial Environment Biometric Entry-Exit Program Integrated Fixed Towers Medium Lift Helicopter Multi-Role Enforcement Aircraft Non-Intrusive Inspection Systems Remote Video Surveillance System 	DHS Management Directorate <ul style="list-style-type: none"> Homeland Advanced Recognition Technology Science and Technology Directorate <ul style="list-style-type: none"> National Bio and Agro-Defense Facility U.S. Coast Guard <ul style="list-style-type: none"> Medium Range Surveillance Aircraft

Source: GAO analysis of Department of Homeland Security (DHS) data. | GAO-22-104684

Breaches in Fiscal Year 2021 Were Due to External and Internal Factors

Of the 23 programs we reviewed, five were in breach of either cost or schedule goals at some point during fiscal year 2021, due to external and internal factors. This is fewer than the 10 programs in breach during our last review.¹⁴ Specifically, two programs breached due to factors external to the program, including labor and supply chain issues related to the COVID-19 pandemic and international contracting delays with an original

¹⁴[GAO-21-175](#).

equipment manufacturer that led to contract awards up to 9 months later than procurement lead times. The other three programs breached due to internal program factors related to an insufficient understanding of the program scope, requirements, and complexity of the work to be accomplished. Two of these programs exited breach status during fiscal year 2021. One program revised its acquisition program baseline and updated its cost and schedule goals. The other program declared full operational capability based on the capability fielded and received DHS leadership approval to restructure and initiate follow-on efforts to meet end-user needs. The remaining three programs were still in breach status as of September 2021 (see table 4). For additional details, see the individual program assessments in appendix I.

Table 4: Programs That Were in Breach of Cost or Schedule Goals in Fiscal Year 2021

Category	Component	Program	Breach declared	Program removed from breach status	Breach type	Reason for breach	Effect of breach
Programs that breached due to factors external to the program	Science and Technology Directorate	National Bio and Agro-Defense Facility	April 2020	December 2020	Schedule	Labor and supply chain issues related to COVID-19	Initial operational capability delayed 7 months.
Programs that breached due to factors external to the program	Science and Technology Directorate	National Bio and Agro-Defense Facility	May 2021	Ongoing	Schedule	Contract modification delay and unforeseen technical issues	Initial operational capability expected to be delayed by 7 months.
Programs that breached due to factors external to the program	U.S. Coast Guard	Medium Range Surveillance Aircraft	May 2020	Ongoing	Schedule	Contracting delays associated with installing a new mission system processor, among other things	Phase 2 ADE 2C and initial operational capability milestones delayed.
Programs that breached due to internal program factors	Cybersecurity and Infrastructure Security Agency	National Cybersecurity Protection System	January 2020	April 2021	Schedule	Revisions to program documentation were required to accurately reflect the mission environment.	Program restructuring to better serve its end users and address evolving mission needs.
Programs that breached due to internal program factors	DHS Management Directorate	Homeland Advanced Recognition Technology	January 2020	Ongoing	Schedule	Contractor's approach was not feasible and a lack of understanding of complexity of requirements.	Initial operational capability for increment 1 delayed.
Programs that breached due to internal program factors	DHS Management Directorate	Homeland Advanced Recognition Technology	May 2020	Ongoing	Cost	Updates to the cost estimate to incorporate additional work necessary to resolve issues driving schedule breach.	Initial operational capability for increment 1 delayed.

Category	Component	Program	Breach declared	Program removed from breach status	Breach type	Reason for breach	Effect of breach
Programs that breached due to internal program factors	Federal Emergency Management Agency	Grants Management Modernization	September 2018	January 2021	Cost	Program underestimated scope and complexity.	Delayed full operational capability by more than 3 years and increased estimated life-cycle cost by \$360 million, which is more than double the previous estimate.
Programs that breached due to internal program factors	Federal Emergency Management Agency	Grants Management Modernization	March 2019	January 2021	Schedule	Contract award delay and resolving issues related to bid protest, among other things	Delayed full operational capability by more than 3 years and increased estimated life-cycle cost by \$360 million, which is more than double the previous estimate.

Source: GAO analysis of Department of Homeland Security (DHS) data. | GAO-22-104684

Of these five programs, one—the Science and Technology Directorate’s National Bio and Agro-Defense Facility program—was removed from breach status only to go back into breach status during fiscal year 2021. Specifically, in April 2020, the program declared a schedule breach that was largely due to labor and supply chain issues related to COVID-19. The program adjusted its construction completion and initial operational capability dates, and DHS removed the program from breach in December 2020. Then, in May 2021, the program declared another schedule breach, this time due to a delay in executing a contract modification and unforeseen technical issues. DHS’s Deputy Under Secretary for Management approved another adjustment to the construction completion and initial operational capability milestones to account for these issues. The Deputy Under Secretary required the program to submit an updated APB by September 2021, but the updated APB is still being reviewed by DHS. The program estimates that the costs associated with the additional work and extended schedule will not exceed its APB cost threshold of \$1.3 billion.

Nine Programs Meeting Goals Rebaselined to Account for Program Changes, such as Scope, Quantity, or Funding Changes

Of the 20 programs that were meeting established goals, nine rebaselined or were in the process of rebaselining during fiscal year 2021. Seven programs were rebaselining due to scope changes, such as a change in quantities, an extended life cycle, or additional funding from Congress, one program rebaselined in response to prior recommendations from our September 2018 report, and one program was rebaselining in response to the contractual relief granted in response to the 2018 Hurricane Michael.¹⁵ See table 5, and, for additional information, see the individual program assessments in appendix I.

¹⁵GAO, *Coast Guard Acquisitions: Polar Icebreaker Program Needs to Address Risks before Committing Resources*, [GAO-18-600](#) (Washington, D.C.: Sept. 4, 2018).

Table 5: Programs That Rebaselined or Were Rebaselining in Fiscal Year 2021

Component	Program	Rebaseline status	Reason for rebaseline
Cybersecurity and Infrastructure Security Agency	Continuous Diagnostics and Mitigation	Approved June 2021	Implements Office of Management and Budget-directed program scope expansion and to enter obtain phase
Transportation Security Administration	Credential Authentication Technology	Ongoing	Program scope expansion to address increased passenger screening requirements and to improve identity verification
U.S. Coast Guard	Fast Response Cutter	Approved July 2021	Program added six cutters to replace old cutters operating in the Middle East. The program received \$240 million in fiscal year 2021 to complete this purchase.
U.S. Coast Guard	National Security Cutter	Ongoing	Program received \$1.2 billion for two additional cutters
U.S. Coast Guard	Offshore Patrol Cutter	Ongoing	Splits the program into two stages as part of the extraordinary contractual relief granted under the provisions contained in Public Law 85-804 in response to Hurricane Michael ^a
U.S. Coast Guard	Polar Security Cutter	May 2021	Addresses recommendations in GAO-18-600 to update the baselines prior to lead ship construction and after the preliminary design review
U.S. Customs and Border Protection	Automated Commercial Environment	Ongoing	Extends the program life cycle from 2026 to 2031 to enhance program capabilities
U.S. Customs and Border Protection	Medium Lift Helicopter	Ongoing	Increases the full operational capability quantity from 20 to 35 aircraft to provide needed vertical-lift capabilities
U.S. Customs and Border Protection	Non-Intrusive Inspection Systems	Approved March 2021	Accounts for changes in the mix of small-scale and large-scale system quantities for full operational capability and extension of program life-cycle

Source: GAO analysis of Department of Homeland Security (DHS) data. | GAO-22-104684

^aSee Pub. L. No. 85-804, codified at 50 U.S.C. § 1431. Executive Order 10789, as amended by Executive Order 13286, implements and authorizes the Secretary of DHS to use the authority. The extraordinary contractual authority authorizes the Secretary of Homeland Security to modify contracts without regard to other provisions of law related to making, performing, amending, or modifying contracts, whenever such action would facilitate national defense.

Programs Generally Achieved Performance Goals, but Some Require Remediation to Address End User Needs

Most of the programs we assessed were generally achieving their performance goals, as reflected in operational test and evaluation. However, four are remediating performance issues. Sixteen of the 23 programs that we reviewed with DHS-approved APBs have completed at least some operational test and evaluation of performance goals that could be tested and were generally achieving those goals as of September 2021. Of the seven programs with DHS-approved APBs not

currently achieving performance goals, three are Coast Guard cutter programs that have not yet begun test and evaluation. The other four are remediating various issues identified through test and evaluation or as part of a rebaseline to address broader issues (see table 6).

Table 6: DHS Major Acquisition Programs Remediating Performance Issues during Fiscal Year 2021

Component	Program	Performance remediation efforts
Cybersecurity and Infrastructure Security Agency	Continuous Diagnostics and Mitigation (CDM)	<ul style="list-style-type: none"> Operational test and evaluation has not yet begun because the program is addressing recommendations from DHS testing officials based on a February 2019 operational assessment and subsequent operational studies. In January 2020, DHS testing officials recommended that the program revise its test and evaluation master plan to integrate lessons learned from user testing prior to acquisition decision event 2B for Data Protection Management, one element of the overall program. In August 2020, we made six recommendations to DHS regarding the program. As of September 2021, five of the six recommendations, which address users' ability to integrate CDM capabilities into cybersecurity processes, remain open.^a
DHS Management Directorate	Homeland Advanced Recognition Technology	<ul style="list-style-type: none"> In January 2021, the breach remediation plan described organizational and technical challenges by the contractor that contributed to the program breach and proposed additional oversight and communication to help resolve these challenges. In August 2021, the program issued an updated risk management plan to address issues with tracking and monitoring of technical risks that may affect performance as well as test and evaluation.
Federal Emergency Management Agency (FEMA)	Grants Management Modernization	<ul style="list-style-type: none"> The program is in the process of evaluating all key performance parameters (KPP) through testing except service availability because that test and evaluation has been deferred until all grant programs are fully supported in a new grants management system called FEMA Grants Outcomes. The program is taking remediation steps to address its software reliability KPP, which was not at an acceptable level to meet user needs.
U.S. Coast Guard	Medium Range Surveillance Aircraft (MRS)	<ul style="list-style-type: none"> The program is addressing limitations to being operationally effective and suitable, as identified in DHS testing officials' findings. Neither the HC-144A nor the C-27J aircraft in the MRS program will be able to meet two of the program's KPPs until the Coast Guard installs the new mission system processor on the aircraft. According to Coast Guard officials, the MRS independent test agent, the Navy's Commander, Operational Test and Evaluation Force, plans to test the new mission system processor in October 2021 to determine if the two outstanding KPPs have been met.

Source: GAO analysis of Department of Homeland Security (DHS) data. | GAO-22-104684

^aGAO, *Cybersecurity: DHS and Selected Agencies Need to Address Shortcomings in Implementation of Network Monitoring Program*, [GAO-20-598](#) (Washington, D.C.: Aug. 18, 2020).

Several other programs that met their performance goals and achieved ADE 3 subsequently required additional test and evaluation at the direction of the Acquisition Review Board to address critical operational issues or other major deficiencies before reaching full operational capability. These programs are making efforts to resolve issues or have resolved them. For example:

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- Coast Guard's National Security Cutter executed follow-on operational test and evaluation in November 2018. DOT&E officials determined, in May 2019, that the program was operationally effective but suitable only with limitations because of issues related to availability and reliability of certain equipment. Coast Guard officials said that they are working to address deficiencies by the end of fiscal year 2022.
 - CBP's Automated Commercial Environment (ACE) Core capability achieved full operational capability in November 2018. DOT&E officials determined that the program was operationally suitable and effective, with limitations. In July 2020, the program completed follow-on testing for the ACE Core capability and the independent test agent determined that the issue had been resolved. As ACE shifts its focus to its Collections capability—which collects and processes duties owed on imported goods—the program will need to rely on reporting by users to assess the Collections capability, as indicated in DOT&E's November 2020 approval of ACE's revised TEMP.

Additional information on these programs is in appendix I.

Programs Continued to Conduct Cybersecurity Activities

We identified several instances of programs planning or conducting cybersecurity and cyber resilience test and evaluation as required for all of the programs in our review, according to the July 2020 DHS Instruction 102-01-012. Cybersecurity refers to the prevention of, damage to, and unauthorized use of a system. For example, FEMA's Grants Management Modernization (GMM) program completed the second of three penetration assessments designed to examine the system to identify significant cyber vulnerabilities and the level of capability required to exploit those vulnerabilities. It also completed an exercise to identify different risk scenarios and prepare them for cyber threats. CBP's ACE program used penetration testing—a simulated cyberattack—to identify and mitigate potential vulnerabilities.

Additionally, we found instances of programs developing a plan to assess cyber resilience—the ability to operate while under attack—as a component of their updated or initial TEMP. For example, FEMA's GMM program included a section in its TEMP, approved in July 2020, which identified cyber resilience objectives and supporting activities. According to DHS testing officials, three programs have no current plans to conduct cyber resilience testing for a variety of reasons. For example, DHS Science and Technology Directorate's National Bio and Agro-Defense Facility program is planned for transition to operation by the U.S.

Department of Agriculture and its test and evaluation is not overseen by DOT&E.

Most Programs Were Able to Address Reported Cost or Schedule Effects from COVID-19 without Requiring Baseline Adjustment Memorandums

In response to the effects of COVID-19 on its major acquisitions, the DHS Deputy Under Secretary for Management issued a memorandum in October 2020 that allowed components to adjust APB milestones up to 6 months due to cost or schedule effects, or longer with leadership approval, without being in breach status. DHS required that any component adjusting milestones for one of its major acquisitions include information about how the program schedule was affected by COVID-19. Per this process, components adjusted APB milestones for four programs in our scope, as shown in table 7.

Table 7: Programs That Adjusted Their Schedule Baselines in Fiscal Year 2021 due to the Effects of COVID-19

Component	Program	Adjustment status	Adjustment	Reason for adjustment
Science and Technology Directorate	National Bio and Agro-Defense Facility	Complete. The COVID-19 schedule adjustment memo is an addendum to the baseline.	Completion of construction extended 6 months Initial operational capability date extended 7 months	Stay-at-home orders, and labor and productivity issues resulting from COVID-19
U.S. Coast Guard	270' Medium Endurance Cutter Service Life Extension Program	Complete. The COVID-19 schedule adjustment memo is an addendum to the baseline.	Integration Readiness Review extended 6 months	COVID-19-related delays in awarding two major long-lead-time material contracts that affected systems engineering events
U.S. Customs and Border Protection	Border Wall System Program Fiscal Year 2018	Pending. Plans for rebaseline are paused in response to January 2021 Presidential Proclamation.	Rio Grande Valley initial operational capability extension to be determined	COVID-19-related delays to construction and various real estate possessions and meetings
U.S. Customs and Border Protection	Integrated Fixed Towers	Complete. The COVID-19 schedule adjustment memo is an addendum to the baseline.	Full operational capability extended 3 months ^a	COVID-19-related delays to road construction in the Casa Grande region and COVID-19 exposures that delayed tower construction

Source: GAO analysis of Department of Homeland Security (DHS) data. | GAO-22-104684

^aFull operational capability for Integrated Fixed Towers occurred in August 2021, 2 months later than the adjustment made by the component in the memo.

Of the four programs with DHS approved memorandums adjusting APB milestones, CBP's Border Wall System Program fiscal year 2018 segment was the only program that did not include details in its memorandum about the duration of schedule adjustment that would be necessary. According to the approved memorandum, the uncertainty of COVID-19's effects made it difficult to project an updated initial operational capability date for the Rio Grande Valley work. We previously reported that COVID-19 created challenges related to meeting with land owners and the closure of some courts, which limited the ability to search county records and hold hearings related to land possession.¹⁶ DHS requested that the Border Wall System Program provide details by February 2021 on the adjustment needed or develop a plan to assess the schedule effects of COVID-19. However, a Presidential Proclamation issued on January 20, 2021, directed DHS to pause construction of the border wall and paused the obligation of funds for the wall to the extent permitted by law. Program officials said that, as of August 2021, the program's fiscal year 2018 segment was still on hold.

In addition to the four programs with DHS-approved schedule adjustment memos, 13 other programs identified cost or schedule effects from COVID-19, including delays related to production, test and evaluation, contract award, and supply chain disruptions. Aside from the four programs mentioned above whose components adjusted baselines, the rest of the programs were able to mitigate these effects without requiring APB adjustment memorandums. See table 8.

¹⁶[GAO-21-175](#).

Table 8: DHS Major Acquisition Programs Reporting COVID-19 Effects That Did Not Require Baseline Adjustment Memorandums in Fiscal Year 2021

Component	Program	Type of COVID-19 effect	Reported COVID-19 effect
Cybersecurity and Infrastructure Security Agency	Next Generation Network - Priority Services Phase 1	Schedule	Test and evaluation delay
Federal Emergency Management Agency	Grants Management Modernization	Cost Schedule	Increased deployment speed due to additional funding received related to COVID-19 response Increased work/requirements
Transportation Security Administration	Checkpoint Property Screening System	Schedule	Production delay
	Credential Authentication Technology	Cost	Fewer fees collected from travelers
U.S. Coast Guard	Fast Response Cutter	Schedule	Production delay, supply chain disruption
U.S. Coast Guard	H-65 Conversion/Sustainment Program	Schedule	Production delay
U.S. Coast Guard	National Security Cutter	Schedule	Production and test and evaluation delays
U.S. Coast Guard	Offshore Patrol Cutter	Schedule	Test and evaluation delay
U.S. Coast Guard	Polar Security Cutter	Schedule	Test and evaluation delay
U.S. Customs and Border Protection	Automated Commercial Environment	Schedule	Test and evaluation delay
U.S. Customs and Border Protection	Biometric Entry-Exit Program	Cost Schedule	Fewer fees collected from travelers Development delay
U.S. Customs and Border Protection	Multi-Role Enforcement Aircraft	Schedule	Supply chain disruption, training
U.S. Customs and Border Protection	Remote Video Surveillance System	Schedule	Production delay

Source: GAO analysis of Department of Homeland Security (DHS) data. | GAO-22-104684

Details of COVID-19 effects on these programs include:

- The Transportation Security Administration's Checkpoint Property Screening System program temporarily halted the deployment of new units at airports, according to program officials. Officials stated the program was unable to complete any installations from March 2020 through June 2020 due to travel restrictions. Additionally, officials identified delays associated with construction and permitting issues at airports, which were caused at least in part by COVID-19. As a result, the program did not meet its goal of deploying the initial 300 scanning units by January 2021. However, officials stated that they were able to make up some of that lost time by speeding up later installations, and

the program was able to complete the deployment of these units by April 2021.

- The U.S. Coast Guard's H-65 program experienced a temporary production shutdown in 2020 due to COVID-19, according to officials. Prior to the COVID-19 pandemic, the program planned to complete six H-65 aircraft conversions in fiscal year 2020. However, a 37-day production shutdown at the U.S. Coast Guard's Aviation Logistics Center in the spring of 2020 led to only five aircraft completing conversion activities. This affected the program's planned schedule for full operational capability, which is expected to shift to July 2024. This new date remains within the APB threshold date, which requires that full operational capability be attained no later than the end of fiscal year 2024.
- According to program officials, the prime contractor for the U.S. Coast Guard's National Security Cutter program, Huntington Ingalls Industries, will deliver the 11th ship 10 months later than planned due to COVID-19–related workforce absences and supply chain disruptions, which could have a follow-on effect of delaying full operational capability. Since the program was already in the process of updating its APB to account for the addition of the 10th and 11th cutters, officials said they will likely include any COVID-19–related delays in the updated APB, which was expected be approved by December 2021.
- CBP's ACE program delayed operational test and evaluation of its Core functionality by 2 months due to COVID-19–related travel restrictions and the need to develop plans for remote testing. The program had planned to start the test event in April 2020 but delayed the start to June 2020.
- CBP's Biometric Entry-Exit program, which relies on travel-related user fees to fund a significant percentage of its operations, collected less of these fees than expected due to COVID-19, according to program officials. As travel volumes decreased, demand for certain types of visas was cut by nearly 50 percent in fiscal year 2020. Prior to COVID-19, officials stated the program collected on average \$60 million in fees that funded program activities. In fiscal year 2020, visa fee applications generated \$35.9 million in funds, and this amount fell to \$28.4 million in fiscal year 2021. As a result of the reduced user fees, the program has been forced to delay development and expansion of the program's biometric matching capabilities, particularly for the segment of the program focused on land borders. The program is focused on maintaining current biometric matching capabilities but expects that any future expansion will lag, as user

fees generated from increased travel do not become immediately available for obligation and expenditure.

In addition to the negative COVID-19 effects described above, one program reported a positive outcome of the federal response to COVID-19. According to program officials, FEMA received an additional \$2.5 million in fiscal year 2021 funding, which the Grants Management Modernization program used to implement the new requirements attached to the CARES Act. This funding helped the program test its design and incorporate new requirements sooner than anticipated.¹⁷ Officials stated the program reviewed the new requirements, which were an extension of an existing program, and narrowed the eligibility criteria, designed the program, and opened funding opportunities through the new system within 35 days. FEMA officials described the speed of this deployment as unprecedented in the agency's history.

Agency Comments

We provided a draft of this report to DHS for review and comment. DHS provided technical comments, which we incorporated as appropriate.

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

If you or your staff have any questions about this report, please contact me at (202) 512-4841 or 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

¹⁷Coronavirus Aid, Relief, and Economic Security Act, Pub. L. No. 116-136 (2020).

List of Committees

The Honorable Gary C. Peters
Chairman
The Honorable Rob Portman
Ranking Member
Committee on Homeland Security and Governmental Affairs
United States Senate

The Honorable Chris Murphy
Chairman
The Honorable Shelley M. Capito
Ranking Member
Subcommittee on Homeland Security
Committee on Appropriations
United States Senate

The Honorable Bennie G. Thompson
Chairman
The Honorable John Katko
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

This appendix presents individual assessments for the 29 Department of Homeland Security (DHS) major acquisition programs we reviewed. Each assessment presents information current as of September 2021. The

Appendix I: Program Assessments

assessments include standard elements such as: an image, a program description, and summaries of the program's progress in meeting cost and schedule goals, and key program information, such as prime contractor and contract type. In addition, the assessments provide summaries of the program execution, performance and testing activities, and program management-related issues, as applicable. The information presented in these assessments was obtained from DHS documentation, answers to our questionnaire by DHS officials, and interviews with DHS and program officials, and includes our analysis of program information. Each assessment also includes the following figures:

- **Acquisition program baseline (APB) versus 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 September 2021. 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 2022 budget request, or a fiscal year 2021 annual life-cycle cost estimate update). Costs shown are based on the program's APB threshold costs and are presented in then-year dollars. For consistency in reporting, we use the terms procurement, construction and improvements (PC&I) and operations and support (O&S) when describing costs in these assessments.
- **Program costs for fiscal years 2022–2026.** This figure provides the programs' estimated PC&I, O&S, and total estimated costs for fiscal years 2022–2026.
- **Schedule.** This figure consists of a timeline that identifies key milestones or other significant events for the program. The timeline identifies when the program completed or expected to reach its major milestones as of September 2021. Dates shown are based on the program's APB threshold dates or updates provided by the program office.

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- **Key performance parameters (KPP).** This figure provides the breakout of the programs' total number of KPPs by whether or not the programs reported those KPPs as met.
 - **Test events.** This figure consists of a timeline that identifies significant test events for the program, including cybersecurity testing. The timeline identifies when the program completed or expected to complete these events as of September 2021.

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

Continuous Diagnostics and Mitigation (CDM)

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Appendix I: Program Assessments

National Cybersecurity Protections System (NCPS)

Appendix I: Program Assessments

Next Generation Network Priority Services (NGN PS) Phase 1

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Next Generation Network Priority Services (NGN PS) Phase 2

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Homeland Advanced Recognition Technology (HART)

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Grants Management Modernization (GMM)

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National Bio and Agro-Defense Facility (NBAF)

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Checkpoint Property Screening Program (CPSS)

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Credential Authentication Technology (CAT)

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270' Medium Endurance Cutter (MEC) Service Life Extension Program (SLEP)

Appendix I: Program Assessments

Fast Response Cutter (FRC)

Appendix I: Program Assessments

H-65 Conversion/Sustainment Program (H-65)

Appendix I: Program Assessments

Long Range Surveillance Aircraft (HC-130J)

Appendix I: Program Assessments

Medium Range Recovery Helicopter (MH-60T) Sustainment Program

Appendix I: Program Assessments

Medium Range Surveillance Aircraft (MRS)

Appendix I: Program Assessments

National Security Cutter (NSC)

Appendix I: Program Assessments

Offshore Patrol Cutter (OPC)

Appendix I: Program Assessments

Polar Security Cutter (PSC)

Appendix I: Program Assessments

Waterways Commerce Cutter (WCC)

Appendix I: Program Assessments

Automated Commercial Environment (ACE)

Appendix I: Program Assessments

Biometric Entry-Exit (BE-E) Program

Appendix I: Program Assessments

Border Wall System Program

Appendix I: Program Assessments

Appendix I: Program Assessments

Appendix I: Program Assessments

Cross Border Tunnel Threat (CBTT)

Appendix I: Program Assessments

Integrated Fixed Towers (IFT)

Appendix I: Program Assessments

Medium Lift Helicopter (MLH)

Appendix I: Program Assessments

Multi-Role Enforcement Aircraft (MEA)

Appendix I: Program Assessments

Non-Intrusive Inspection (NII) Systems and NII Integration Programs

Appendix I: Program Assessments

Remote Video Surveillance System (RVSS)

Appendix I: Program Assessments

The objectives of this audit were designed to provide congressional committees insight into the Department of Homeland Security's (DHS) major acquisition programs. We (1) examined the extent to which

Appendix II: Objectives, Scope, and Methodology

selected DHS major acquisition programs are meeting their baseline goals and (2) described the programs' efforts to mitigate Coronavirus Disease 2019 (COVID-19)-related cost and schedule effects.

To address these questions, we selected 29 of DHS's 37 major acquisition programs.¹ We selected 13 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 16 other major acquisition programs 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. Two of these 16 programs were level 2 acquisitions with LCCEs between \$300 million and less than \$1 billion in the obtain phase. The other 14 programs were level 1 or level 2 programs that had not yet entered or were beyond the obtain phase. 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 seven different components, and they are identified in table 9, along with our rationale for selecting them.

¹Our review included 28 of the 30 programs we reviewed in GAO, *DHS Annual Assessment: Most Acquisition Programs Are Meeting Goals but Data Provided to Congress Lacks Context Needed for Effective Oversight*, [GAO-21-175](#) (Washington, D.C.: Jan. 19, 2021).

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

Table 9: Rationale for Selecting DHS Major Acquisition Programs for Review

Component	Program	Level 1 program in the obtain phase at the initiation of our audit	Level 1 and Level 2 program identified to be at risk^a
Cybersecurity and Infrastructure Security Agency	Continuous Diagnostics and Mitigation	applicable	not applicable
Cybersecurity and Infrastructure Security Agency	National Cybersecurity Protection System	applicable	not applicable
Cybersecurity and Infrastructure Security Agency	Next Generation Network Priority Services Phase 1	not applicable	applicable
Cybersecurity and Infrastructure Security Agency	Next Generation Network Priority Services Phase 2	not applicable	applicable
DHS Management Directorate	Homeland Advanced Recognition Technology	applicable	not applicable
Federal Emergency Management Agency	Grants Management Modernization	not applicable	applicable
Science and Technology Directorate	National Bio and Agro-Defense Facility	applicable	not applicable
Transportation Security Administration	Checkpoint Property Screening System	applicable	not applicable
	Credential Authentication Technology	not applicable	applicable
U.S. Coast Guard	270' Medium Endurance Cutter Service Life Extension Program	applicable	not applicable
U.S. Coast Guard	Fast Response Cutter	not applicable	applicable
U.S. Coast Guard	H-65 Conversion/Sustainment Program	not applicable	applicable
U.S. Coast Guard	Long Range Surveillance Aircraft (HC-130J)	not applicable	applicable
U.S. Coast Guard	Medium Range Recovery Helicopter (MH-60T)	applicable	not applicable
U.S. Coast Guard	Medium Range Surveillance Aircraft	applicable	not applicable
U.S. Coast Guard	National Security Cutter	not applicable	applicable
U.S. Coast Guard	Offshore Patrol Cutter	applicable	not applicable
U.S. Coast Guard	Polar Security Cutter	applicable	not applicable
U.S. Coast Guard	Waterways Commerce Cutter	not applicable	applicable
U.S. Customs and Border Protection	Automated Commercial Environment	applicable	not applicable
U.S. Customs and Border Protection	Biometric Entry-Exit Program	not applicable	applicable
U.S. Customs and Border Protection	Border Wall System Program	applicable	not applicable
U.S. Customs and Border Protection	Cross Border Tunnel Threat	applicable	not applicable
U.S. Customs and Border Protection	Integrated Fixed Towers	not applicable	applicable

Appendix II: Objectives, Scope, and Methodology

Component	Program	Level 1 program in the obtain phase at the initiation of our audit	Level 1 and Level 2 program identified to be at risk ^a
U.S. Customs and Border Protection	Medium Lift Helicopter	not applicable	applicable
U.S. Customs and Border Protection	Multi-Role Enforcement Aircraft	not applicable	applicable
U.S. Customs and Border Protection	Non-Intrusive Inspection Systems	not applicable	applicable
U.S. Customs and Border Protection	Non-Intrusive Inspection Integration	not applicable	applicable
U.S. Customs and Border Protection	Remote Video Surveillance System	not applicable	applicable

Legend: X = applicable rationale ; — = not applicable

Source: GAO analysis of Department of Homeland Security (DHS) data. | GAO-22-104684

^aPrograms with Xs in this column are either Level 2 programs in the obtain phase or Level 1 and 2 programs that had not yet entered or were beyond the obtain phase 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.

To determine the extent to which DHS's major acquisition programs are meeting their cost, schedule, and performance 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—at ADE 2B. Twenty-four of the 29 programs had one or more department approved LCCEs and APBs between November 2008 and September 30, 2021.² We subsequently determined that one of these 24 programs, the Border Wall System Program, should be excluded from our aggregated analyses, due to the January 2021 Presidential Proclamation directing a pause in the construction of the border wall to the extent permitted by law. We used these APBs to identify 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. Specifically, for each program, we prepopulated data collection instruments to the extent possible with the schedule and cost information

²The remaining five programs—Cross-Border Tunnel Threat, Non-Intrusive Inspection Systems Integration, Next Generation Network Priority Services Phase 2, Medium Range Recovery Helicopter (MH-60T), and Waterways Commerce Cutter—did not receive department approval of their initial APBs by September 30, 2021. Therefore, we excluded them from our assessment of whether programs are on track to meet their schedule and cost goals during fiscal year 2021.

we had obtained from the APBs and our prior assessments (if applicable) to identify schedule and cost goal changes, if any, during fiscal year 2021. 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 also 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 COVID-19 pandemic. We identified the number of programs with DHS-approved APBs that achieved performance goals during fiscal year 2021 by determining the number of programs that 1) conducted testing of deployed capabilities and 2) DOT&E determined that the program's key performance parameters were generally met. If programs did not meet one or more key performance parameters because they did not yet complete testing of capabilities, we counted those programs as not meeting their performance goals for that reason. If programs had unmet performance goals but met goals that were testable, then we counted those programs as meeting performance goals for those goals possible to test.

To determine programs' efforts to mitigate COVID-19–related cost and schedule effects, we first reviewed the October 2020 DHS memorandum granting level 1 and selected level 2 programs the ability to adjust their APB schedule baseline goals up to 6 months (or more with leadership approval) due to effects related to COVID-19. We then reviewed baseline adjustment memorandums associated with programs that made use of this authority, as applicable. We also reviewed program documentation and conducted interviews with programs in our scope to determine any additional COVID-19 cost and schedule effects and how programs mitigated these effects.

Subsequently, we drafted preliminary assessments for each program. When drafting these assessments, we combined the Non-Intrusive Inspection Systems Program with the Non-Intrusive Inspection Integration program because the Non-Intrusive Inspection Integration program is a follow-on effort that has not yet established a preliminary APB. In addition, we drafted three assessments for the Border Wall System Program—one for each of fiscal years 2018, 2019, and 2020—because the program established acquisition program baselines for each fiscal year that funding was provided. Finally, we drafted the Next Generation Networks Priority Services Phase 1 and 2 programs as two assessments because the Phase 2 program established a preliminary acquisition

program baseline during our review period. After drafting the assessments, we 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).

We conducted this performance audit from December 2020 to March 2022 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.

GAO Contact

Appendix III: GAO Contact and Staff Acknowledgments

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Staff Acknowledgments

In addition to the contact listed above, Angie Nichols-Friedman (Assistant Director), Scott Purdy (Analyst-in-Charge), John Crawford, Andrea Evans, TyAnn Lee, and Philip Oyoo made key contributions to this report. Other contributors included Erin Butkowski, Alexandra Dew Silva, Lorraine Ettaro, Alexandra Gebhard, Stephanie Gustafson, Katheryn Hubbell, Claire Li, Alexis Olson, Jenny Shinn, Anne Louise Taylor, Alyssa Weir, and Robin Wilson.

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Appendix IV: Additional Source Information for Images and Figures

Front cover: U.S. Coast Guard (H-65 helicopter).

Appendix I: GAO analysis of Department of Homeland Security data and information (all figures).

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