The Department Needs to Improve Oversight to Ensure the Success of Its Financial System Modernization

U.S. Department of Commerce
Office of Inspector General
Office of Audit and Evaluation

UNITED STATES DEPARTMENT OF COMMERCE
Office of Inspector General
Washington, D.C. 20230

February 22, 2024

MEMORANDUM FOR: Don Graves
Deputy Secretary of Commerce
U.S. Department of Commerce

FROM: Frederick J. Meny, Jr.
Assistant Inspector General for Audit and Evaluation

SUBJECT: *The Department Needs to Improve Oversight to Ensure the Success of Its Financial System Modernization*
Final Report No. OIG-24-014-A

Attached is our final report on the audit of the U.S. Department of Commerce's Business Applications Solution (BAS) program. Our objective was to assess the Department's progress in managing and implementing the BAS program.

We found the following:

I.   The Department has not established BAS program baselines for measuring performance.

II. The program does not have adequate cost and schedule management controls.

III. The Department should capture lessons learned from implementing BAS at the National Oceanic and Atmospheric Administration (NOAA) and apply them to National Institute of Standards and Technology and U.S. Census Bureau implementations.

We also noted several other significant issues:

- NOAA has experienced system functionality problems since it transitioned its financial operations to BAS on October 25, 2023.

- Scope changes in the BAS system will likely result in significant cost increases, primarily for additional operations and maintenance support.

- All six of our prior audit's recommendations, some of which may have helped limit the problems NOAA has experienced, remain open.

In response to our draft report, the Department acknowledged our findings and accepted our recommendations. The response is included in appendix C of this report.

Pursuant to Department Administrative Order 213-5, please submit to us an action plan that addresses the recommendations in this report within 60 calendar days. The final report will be

posted on the Office of Inspector General's website pursuant to the Inspector General Act of 1978, as amended (5 U.S.C. §§ 404 & 420).

We appreciate the cooperation and courtesies extended to us by your staff during this audit. If you have any questions or concerns about this report, please contact me at (202) 793-2938 or Kevin Ryan, Director for Audit and Evaluation, at (202) 695-0791.

Attachment

cc: Jeremy Pelter, Deputy Assistant Secretary for Administration, performing the non-exclusive functions and duties of the Chief Financial Officer and Assistant Secretary of Commerce for Administration
Steve Kunze, Deputy Chief Financial Officer and Director for Financial Management
Teresa Coppolino, Director and BAS Program Manager, Office of Financial Management Systems
Jon Alexander, Deputy Director and BAS Deputy Program Manager, Office of Financial Management Systems
Lindsay Hochberg, Supervisory Program Analyst and BAS Project Manager, Office of Financial Management Systems
Mark B. Daley, Deputy for Acquisition Program Management
Benjamin Friedman, Deputy Under Secretary for Operations, NOAA
Ron S. Jarmin, Deputy Director and Chief Operating Officer, U.S. Census Bureau
Charles H. Romine, Associate Director for Laboratory Programs, National Institute of Standards and Technology

OFFICE OF THE SECRETARY

The Department Needs to Improve Oversight to Ensure the Success of Its Financial System Modernization

OIG-24-014-A

WHAT WE FOUND

To meet our objective, we examined the Department's BAS program oversight, assessed the program's cost, schedule, and performance controls, and reviewed aspects of the program's system implementation efforts.

Although the program prepared for the transition to BAS at NOAA, we found the following:

I. The Department has not established the program's baselines and does not adequately oversee its cost and schedule performance.

II. The program does not have adequate cost and schedule management controls.

III. The Department should capture lessons learned from implementing BAS at NOAA and apply them to the upcoming NIST and Census implementations.

Addressing these issues will be important to ensuring program accountability and long-term success and will benefit the upcoming implementations.

WHAT WE RECOMMEND

We recommend that the Deputy Secretary of Commerce:

1. Ensure the development and ongoing maintenance of a lifecycle cost estimate and schedule for the program in accordance with the Department's *Acquisition Project Management Policy* (DAO-208-16) and the U.S. Government Accountability Office's (GAO's) *Cost Estimating and Assessment Guide and Schedule Assessment Guide.*

2. Ensure that the BAS Executive Board reviews the program's cost, schedule, and scope performance against baselines, as well as risk management and additional metrics needed to support adequate investment oversight.

3. Ensure the program defines and executes cost management controls in accordance with DAO-208-16 and the *Department of Commerce Cost Estimating Guide.*

4. Ensure the program defines and executes schedule management controls in accordance with DAO-208-16 and GAO's *Schedule Assessment Guide.*

5. Direct the program to work with the contractor to ensure the Department receives the full value of monthly reports by including sufficient information for monitoring cost compared to budget and managing changes to schedule and cost baselines, thereby putting funds for those deliverables to better use.

6. Ensure the Department facilitates the collection of lessons learned from the NOAA financial applications' implementation and incorporates those lessons into plans and procedures for the NIST and Census implementations.

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*Cover: Herbert C. Hoover Building main entrance at
14th Street Northwest in Washington, DC. Completed in
1932, the building is named after the former Secretary
of Commerce and 31st President of the United States.*

Introduction

The Business Applications Solution (BAS) program will modernize the Department of Commerce's aging and disparate financial systems. This new enterprise system will be a collection of commercial off-the-shelf applications, hosted in the cloud and accessed through a common portal.

Along with three financial management applications, BAS includes an enterprise data warehouse and a business intelligence reporting capability. BAS is a top priority IT investment under the Department's strategic plan. As such, the success of BAS is critical to the Department's efforts to modernize its mission support processes and infrastructure.[1]

In October and November 2022, the program implemented its property management application and some of its acquisition management applications across the Department. In October 2023, after a 1-year delay, the program transitioned the National Oceanic and Atmospheric Administration's (NOAA's) financial operations to the BAS system. The program will now work to transition the National Institute of Standards and Technology's (NIST's) financial operations at the start of fiscal year (FY) 2025 and Census Bureau operations at the start of FY 2026.

When the program transitioned NOAA's financial operations on October 25, 2023, the new system was not completely functional. Notably, NOAA could not pay invoices and reimburse employees for travel expenses, in part because of problems with data conversion.[2] While the program and NOAA worked together to resolve the issues, many of the system's functional problems persisted for 4 to 5 weeks. As a result, NOAA's backlog of unpaid invoices grew to nearly 5,000; the backlog of unpaid travel vouchers reached nearly 4,000. In some cases, NOAA resorted to manual workarounds to make payments. As of December 1, NOAA began to make progress on the backlogs but expected the activity to continue into the second quarter of FY 2024.[3]

The full value of the Department's original firm, fixed-price contract for BAS was $341 million.[4] This covers the implementation, operations, and maintenance of the system from April 2020 through April 2039. After the yearlong delay to the NOAA implementation, the program's contract costs increased by $12.7 million for FY 2022, bringing the total contract cost to $353 million.

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[1] Department of Commerce (DOC), n.d. *U.S. Department of Commerce Strategic Plan 2022–2026*. Strategic objective 5.5, 73–75. Washington, DC: DOC. Available at https://www.commerce.gov/sites/default/files/2022-03/DOC-Strategic-Plan-2022%E2%80%932026.pdf (accessed December 2022).

[2] See finding III (9).

[3] According to NOAA, as of December 1, the bureau had paid about 1,000 invoices totaling $84 million and expected to address the remaining 4,000 invoices by January 2024. It had paid 1,900 (48 percent) of its pending travel reimbursements and expected to have paid about 2,900 (73 percent) before December 31.

[4] This amount comprises $272 million in firm, fixed-price contract deliverables and $68 million in time-and-materials options for surge support.

Recently, we learned that the Department is evaluating another significant cost increase to the contract. Although the Department had originally intended to use the "out-of-box" capabilities of the applications it purchased for BAS, it chose during the first system implementation to have its contractor customize the BAS financial applications.[5] These customizations will require increased contractor support for the system's operations and maintenance.

We issued a management alert concerning the BAS program in April 2021,[6] followed by an audit report in July 2022.[7] The report recommended six improvements to the program's plans and approach for reengineering business processes, managing requirements, and managing risk. All six recommendations remain open because the Department delayed implementing them— some for more than a year—to coincide with the completion of NOAA's transition activities at the end of November 2023.

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[5] In January 2021, program officials told us the contractor expected to meet 99.5 percent of requirements simply by configuring the new software applications.

[6] DOC Office of Inspector General (OIG), April 19, 2021. Management Alert: *BAS Program's Focus on Technology May Overlook Risks Related to Business Processes* (OIG-21-023-M). Washington, DC: DOC OIG (accessed December 2022).

[7] DOC OIG, July 7, 2022. *The BAS Program Needs to Increase Attention to Business Process Reengineering and Improve Program Management Practices* (OIG-22-025-A). Washington, DC: DOC OIG (accessed December 2022).

Objective, Findings, and Recommendations

Our objective was to assess the Department's progress in managing and implementing the BAS program. To meet this objective, we examined the Department's oversight of the program, assessed the program's cost, schedule, and performance controls, and reviewed aspects of the program's system implementation efforts. See appendix A for a more detailed description of our scope and methodology.

We found that although the program prepared for the operational transition to BAS at NOAA, (1) the Department has not established the program's baselines and does not adequately oversee the program's cost and schedule performance; (2) the program does not have adequate cost and schedule management controls; and (3) the Department should capture lessons learned from implementing BAS at NOAA and apply them to the upcoming NIST and Census implementations.

Addressing these issues will be important to ensure program accountability and long-term success. Reliable cost and schedule controls are necessary for effective departmental oversight of the program's performance; the program must implement these controls to monitor and measure progress, identify issues, correct deviations, and address risks before they occur. Finally, recording lessons learned from the NOAA implementation of BAS will benefit the subsequent implementations.

I.   The Department Has Not Established BAS Program Baselines for Measuring Performance

Departmental oversight of the program has primarily been performed by two review boards. A milestone review board (MRB) assessed the program's efforts in support of the project approval and project implementation milestones (referred to as milestones 2 and 3, respectively).[8] In addition, the BAS Executive Board meets monthly to review the program's status. We found shortcomings with aspects of the oversight performed by both bodies.

A.   *Department approved the program's implementation without an adequate lifecycle cost estimate or schedule*

Department acquisition policy[9] and U.S. Government Accountability Office (GAO) best practices[10] require programs to have lifecycle cost estimates and schedules. The Department's Office of Acquisition Management (OAM), through its policies and guidance, has emphasized the importance of these management controls.

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[8] In addition, departmental executive councils (e.g., the Chief Financial Officer and Chief Information Officer councils) receive monthly status and update briefings from the program.

[9] Department Administrative Order (DAO) 208-16, *Acquisition Project Management*, sections 3.03(a)(1), 4.03, 4.04, 5.04(a). Washington, DC: DOC.

[10] GAO, March 2020. *Cost Estimating and Assessment Guide: Best Practices for Developing and Managing Program Costs* (GAO-20-195G). Washington, DC: GAO; GAO, December 2015. *Schedule Assessment Guide: Best Practices for Project Schedules* (GAO-16-89G). Washington, DC: GAO.

In 2019, the MRB recognized that the program had not established a total program baseline that included cost, schedule, and scope. In the program's milestone 2 decision memorandum, the Deputy Secretary noted that "due to the accelerated nature of the BAS program's acquisition cycle," certain programmatic artifacts required for the milestone were not available—notably, the program's cost estimate and schedule. Noting this deficiency, the Deputy Secretary approved BAS to continue but directed the program to establish its total baseline by milestone 3. The Deputy Secretary made clear that this baseline must include "all efforts (e.g., Bureau related tasks) necessary to support the successful implementation of the BAS program."

However, the Department chose not to conduct a milestone 3 review. Although the Department awarded the BAS contract and planned to hold a milestone 3 review in 2020, the MRB executive secretariat determined in August 2022 that a formal milestone 3 approval had been "overtaken by events." The memorandum documenting the decision not to conduct a review further stated that "OAM is aware that the BAS program has established a program baseline for cost, schedule, and scope, which it has adjusted since establishment with contract award. It has also been working with bureaus to establish baselines for operation and sustainment post deployment." The memorandum suggested that the program's action items were delivered or otherwise accomplished through other means.

Yet we found that the program did not establish a baseline for cost, schedule, and scope. The program's cost estimate does not include all efforts necessary to support the successful implementation of the program and does not meet departmental policy requirements and best practices. Similarly, the program does not have a schedule that represents all activities from beginning to end. (We discuss these issues further in findings II.A and II.B.)

As a result, the program continues to lack a reliable lifecycle cost estimate and schedule. Finding II describes weaknesses in both of these critical management controls. These weaknesses obscure the program's cost and schedule performance and put the program at greater risk of incurring cost increases and schedule delays. To date, the program has incurred one significant delay due to a third-party vendor's inability to support BAS' original timeframes for data migration. This delayed all bureau implementations by 1 year each and initially increased contract costs by $12.7 million. Scope changes, in the form of customizations to the financial applications, will likely result in more significant cost increases, primarily for additional operations and maintenance support.

B. *Ongoing oversight does not review the program's cost and schedule performance or its risk management*

The BAS Executive Board, which is composed of departmental management officials, convenes monthly to monitor the program's progress. In these meetings, the board reviews the current state of BAS. According to its charter, the board is to discuss the program's schedule, budget, risks, issues, security, action items, and "decisions needed."

These meetings are informed by a briefing the program gives the board. However, the briefings do not depict the program's progress against cost plans, and they provide limited views of schedule progress; they also do not include sufficient information about actual costs versus baseline costs or schedule performance. Additional program performance metrics and information are also omitted, including scope (requirements added or removed) and how cost, schedule, or scope variances may impact the program's planned delivery of capabilities. In addition, the briefings include limited information about risks and the program's efforts to manage them.

We found no evidence that the board has required the program to document key information it needs to comply with its charter (in particular, schedule and cost performance metrics, risks, and issues). As a result, the board does not have enough information to adequately monitor the program's performance. This inhibits leadership's ability to make effective programmatic decisions based on valid, updated information.

Recommendations

We recommend that the Deputy Secretary:

1. Ensure the development and ongoing maintenance of a lifecycle cost estimate and schedule for the program in accordance with the Department's *Acquisition Project Management Policy* (DAO-208-16) and GAO's *Cost Estimating and Assessment Guide* and *Schedule Assessment Guide*.

2. Ensure that the BAS Executive Board reviews the program's cost, schedule, and scope performance against baselines, as well as risk management and additional metrics needed to support adequate investment oversight.

II. The Program Does Not Have Adequate Cost and Schedule Management Controls

Reliable cost estimates and schedules are essential tools for planning and executing IT programs that meet objectives on time and within budget. Such tools provide a performance baseline from which to monitor and measure progress, identify issues, correct deviations, and address risks before they occur.

A. *The program does not maintain a properly constructed, up-to-date lifecycle cost estimate*

The Department acquisition policy requires programs to develop and regularly update a lifecycle cost estimate (LCCE) in accordance with GAO's cost estimating best practices.[11] A reliable LCCE is comprehensive, well-documented, accurate, and credible.[12]

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[11] DAO-208-16, *Acquisition Project Management*, sections 3.03(a)(1), 4.03, 4.04, 5.04(a). (accessed November 2022); DOC-OAM, December 2022. *U.S. Department of Commerce Cost Estimating Guide, version 1.0* (program memorandum 2023-04), 8–13, 21–25. Washington, DC: DOC (accessed January 2023).
[12] GAO, March 2020. *Cost Estimating and Assessment Guide: Best Practices for Developing and Managing Program Costs* (GAO-20-195G), 31. Washington, DC: GAO (accessed December 2022).

To be reliable, an LCCE should include all costs for the lifecycle of the program, be based on a cost analysis requirements description, and follow a work breakdown structure.[13] The LCCE should be regularly updated with actual costs incurred and changes in the program's information, scope, and risks. The updated LCCE should be used as a basis for comparison to the original cost baseline and for monitoring cost performance and identifying cost drivers. Following these best practices helps minimize the risk of incurring cost overruns and unmet performance targets.

We found that the program does not maintain a reliable LCCE in accordance with Department policy and best practices. The program does not have a cost analysis requirements description, a detailed work breakdown structure, or other supporting documentation that provide a basis for the estimate.

The program's estimate is a spreadsheet of costs for 6 years (FYs 2020 through 2025), far short of the BAS system's anticipated 20-year life cycle (through fiscal year 2040). The spreadsheet depicts just three cost elements: contract cost, program overhead, and management reserve, far less detail than we would expect for a program of its scale and complexity. Bureau-related costs, as well as maintenance, operations, and sustainment costs, are not included in the estimate.

Further, the program has not updated its estimate since the program's milestone 2 review in 2019. Since then, the program has delayed its three implementations by 1 year each, resulting in an actual cost increase, but it has not updated its estimate with this increase. In addition, the program does not otherwise compare its actual costs to the cost estimate for reporting cost progress or variances to oversight councils.

We found no evidence that Department oversight has monitored or otherwise required the program to develop and maintain an LCCE in accordance with policy. In addition, the program lacks specialized staff primarily responsible for cost estimation.

The lack of attention to an LCCE means that the Department cannot reliably characterize the lifecycle cost of BAS or monitor the program's cost performance. This in turn hinders the ability to control costs, leaving the program at increased risk of unexpected cost growth.

B. *The program does not manage a reliable integrated master schedule*

Department acquisition policy requires programs to develop and regularly update a schedule.[14] A best practice is the use of an integrated master schedule, which should be the focal point for monitoring the program's schedule and, thereby, cost.[15] We found

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[13] DOC OAM, December 2022. *U.S. Department of Commerce Cost Estimating Guide, version 1.0* (program memorandum 2023-04), 6, 8, 10–11. Washington, DC: DOC (accessed January 2023). See also GAO *Cost Estimating* and *Assessment Guide*, 31.

[14] DAO-208-16, *Acquisition Project Management*, sections 3.03, 3.03(b), 4.03, 6.02; DOC, August 2015. *DOC Scalable Acquisition Project Management Guidebook*, version 1.2, 153. Washington, DC: DOC.

[15] GAO, December 2015. *Schedule Assessment Guide: Best Practices for Project Schedules* (GAO-16-89G), i, 5. Washington, DC: GAO. Available at https://www.gao.gov/assets/gao-16-89g.pdf (accessed December 2022).

that the program's schedule is not comprehensive, well-constructed, credible, or controlled—and, therefore, not reliable.

First, the schedule does not include all program activities from beginning to end. Instead, the schedule is limited to only the activities of the NOAA implementation of financial management applications. Notably, the schedule does not include future implementation, operations, and decommissioning phase activities. Best practices, however, call for the schedule to capture all effort required to successfully complete the program from start to finish.

The schedule's construction also included logical relationships[16] for only about half of the scheduled activities. Therefore, there is no means of determining the schedule's critical path—activities that cannot be delayed without in turn delaying the project's completion. Identifying critical paths is a key best practice in managing projects of BAS' scale.

In addition, we found that the program does not use its schedule to plan or assign work, or to proactively identify potential issues. Program staff told us they limit use of the schedule to documenting completion of activities under the current phase. Staff also told us they manage or track many activities in separate documents, outside of the schedule.

Finally, we learned that the program struggles to control versions of its schedule. Copies of the schedule are saved on a shared drive, and the software the program uses for the schedules lacks automated versioning that would allow for auditing. Staff described problems with file corruption and noted that their software often failed to open the schedule files and created other technical difficulties.

Our review suggests the following contributing factors to these shortcomings:

- The program has not defined effective processes in its schedule management plan so that it can create and maintain a reliable schedule. This should include a basis document, which would explain the program's overall approach, scheduling assumptions, and unique features of the schedule.

- In scheduling, best practices are interrelated, so deficiencies in one best practice cause shortcomings in others. Because the schedule does not capture all activities, there is uncertainty about whether activities are sequenced in the correct order and whether the schedule properly reflects the resources needed to accomplish the work. In addition, incomplete logical relationships between scheduled activities prevent the program from identifying the schedule's critical path.

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[16] A logical relationship means defining the order in which scheduled activities are to be carried out, either in sequence to each other or at the same time. Once defined across scheduled activities, this order results in a network of logical relationships that can reliably forecast start and finish dates of future activities based on the program's current status. (See GAO's *Schedule Assessment Guide*, GAO-16-89G, 28–47.)

As a result, the program cannot leverage key features of a reliable integrated master schedule, such as identifying the critical path and schedule dependencies. By using a schedule covering only one of its three implementations, the program lacks a reliable basis for estimating how and by when it will complete its activities, milestones, and implementations. Without a defined, consistently applied change control process, the program's true performance can be obscured, as it continues to make changes that simply match its execution. Finally, by not proactively managing its schedule in accordance with best practices, the program is less able to identify and manage risks before they cause delays.

C. *Contractor status reports do not provide sufficient information to assist the program's monitoring and control efforts*

The BAS contract requires the contractor to provide periodic status reports on work completed and planned. The contract states, "The Contractor shall provide regular status reports to report project progress, monitor actual costs compared to budget, and manage changes to schedule and cost baselines to achieve defined objectives." The contract also requires the contractor's status reports to "include any additional information—including findings and recommendations—that may assist the Government in evaluating progress under the contract."

The BAS contractor supplies three periodic reports: monthly status reports, monthly cost and performance reports, and periodic schedule updates. The monthly status reports list accomplishments, submitted deliverables, upcoming activities, and a summary of program risks. The monthly cost and performance reports list deliverables' dates and costs. The periodic schedule updates provide program schedules, which we discuss above in finding II.B.

However, these reports and schedules do not track actual costs as compared to budget and do not provide sufficient information to manage changes to schedule and cost baselines. For example, the information in monthly status reports, without reference to schedule and cost baselines, is insufficient for monitoring and managing those program variables in accordance with contract requirements. In addition, the reports do not include substantive information about issues and risks.

The program appears to accept the reports without full consideration of their requirements as defined in the contract. We conclude the reports do little to help the program evaluate progress under the contract.

By working with the contractor to provide the full range of information required by the contract, the program would put the funds expended on project management services to better use.[17]

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[17] We found that up to $1.91 million of costs for project management services over fiscal year 2024 and part of fiscal year 2025 could be put to better use by meeting recommendation 5 (see appendix B).

Recommendations

We recommend that the Deputy Secretary:

3. Ensure the program defines and executes cost management controls in accordance with the Department's *Acquisition Project Management Policy* (DAO-208-16) and *Department of Commerce Cost Estimating Guide*.

4. Ensure the program defines and executes schedule management controls in accordance with the Department's *Acquisition Project Management Policy* (DAO-208-16) and GAO's *Schedule Assessment Guide*.

5. Direct the program to work with the contractor to ensure the Department receives the full value of monthly reports by including sufficient information for monitoring cost compared to budget and managing changes to schedule and cost baselines, thereby putting funds for those deliverables to better use.

III. The Department Should Capture Lessons Learned from Implementing BAS at NOAA and Apply Them to NIST and Census Implementations

During our fieldwork, the program and NOAA completed activities for NOAA's financial application implementation, including system integration testing[18] from February to May 2023 and user acceptance testing (UAT) from May to August 2023. In addition to an "early adopter activity" in November 2022, UAT was an opportunity for actual users[19] to test the BAS financial applications.

Although we did not directly assess these activities, we learned of several challenges that present opportunities for the program to improve the upcoming implementations at NIST and Census over the next 2 fiscal years.

Best practices for lessons learned[20] state that a program should identify lessons and use them as ways to revise planning and risk management processes, identify risks, and define and track corrective actions to closure. During the NOAA financial systems implementation, the program and stakeholders faced the following challenges that may become valuable lessons learned:

1. The program planned to have testers familiar with their assigned role (e.g., a purchaser who only tested purchasing functions). However, in some cases, bureaus assigned staff that were unfamiliar with the roles and activities being tested.

2. Overall, the program resolved 99 percent of defects by the end of UAT. However, at times the program struggled to address all UAT script defects generated in a

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[18] System integration testing ensures that the financial applications link together to form the integrated BAS system.

[19] UAT testers consisted mainly of NOAA staff and limited numbers of NIST and Census staff.

[20] Software Engineering Institute, November 2010. *Capability Maturity Model® Integration for Acquisition*, version 1.3, 71–72, 201, 211–212, 303–305, 333–334, 403. Pittsburgh, PA: SEI.

testing wave before the next one. As a result, the program did not consistently provide timely feedback to the bureaus during each testing wave.

3. The program and stakeholders had different expectations for the pass and fail conditions of UAT scripts, tester responsibilities for resolving defects, and progress reporting.

4. Even as NOAA's transition date neared, the bureau did not fully understand how the BAS system would support some of its financial operation requirements. NOAA tracked a number of different concerns, such as how to perform critical financial management functions, whether the system performed certain functions, and delays in responses to other information requests.

5. Data conversion issues seemed to be a root cause of NOAA's inability to process payments after the "go-live" on October 25, 2023. Specifically, invoice payments failed due to data mismatches between the BAS financial system and the U.S. Department of the Treasury's Invoice Processing Platform. In addition, travelers could not be reimbursed due to errors importing the Department's travel system data into BAS. Though both the program and NOAA performed mock data conversions well in advance of the go-live, the impacts data conversion problems had on NOAA's ability to make payments indicate that additional testing, verification, and validation may be needed to ensure smoother transitions for NIST and Census.

The effects of the challenges we observed ranged from delaying the completion of testing to creating uncertainty on the part of bureau stakeholders as to what extent the new system will support their requirements for financial operations. Together, these issues could impede program efforts to fully transition bureaus to a single modern financial system. Therefore, it is important for the Department to learn from these challenges and improve its efforts going forward.

Additionally, in our 2022 audit, we recommended that the program sufficiently define target processes to include details of information flows, interconnections, and potential problem areas and assess expected performance.[21] This activity is a necessary precursor to limiting data conversion issues that were experienced after the go-live. We also noted that the program had not fully documented NOAA's existing business processes or the new processes to be used with the new system, an approach that risks introducing inefficiencies to bureau processes and lowering adoption of the new system.[22] To ensure program success, it is imperative that the Department implement our recommendations.

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[21] DOC OIG, July 7, 2022. *The BAS Program Needs to Increase Attention to Business Process Reengineering and Improve Program Management Practices* (OIG-22-025-A), 5–6. Washington, DC: DOC OIG.

[22] *Ibid*, 9–11.

Recommendation

We recommend that the Deputy Secretary:

6. Ensure the Department facilitates the collection of lessons learned from the NOAA financial applications' implementation and incorporates those lessons into plans and procedures for the NIST and Census implementations.

Summary of Agency Response and OIG Comments

In response to our draft report, the Department indicated its acknowledgement and understanding of our findings. The Department accepted our recommendations and stated that it "is committed to improving the processes surrounding its multi-phased implementation of BAS—including through further implementation of the draft report's recommendations." The full response is included in appendix C.

We are pleased with the Department's response and look forward to reviewing its action plan, which will provide details on its corrective actions.

Appendix A: Objective, Scope, and Methodology

Our objective was to assess the Department's progress in managing and implementing the BAS program. To meet this objective, we examined departmental oversight of the program, assessed the program's cost, schedule, and performance controls, and reviewed aspects of the program's system implementation efforts for NOAA, including system integration testing and UAT.

To examine departmental oversight of the program, we reviewed departmental policies to identify cost and schedule baseline development requirements for IT programs, as well as artifacts used to support the milestone 2 and 3 decisions for BAS. We also examined monitoring activities and artifacts for the program, such as BAS Executive Board meeting briefings, executive council reports, and monthly status reports.

To assess the program's cost, schedule, and performance controls, we examined its control plans such as its cost estimate, schedule, and related management activities. We compared these to requirements in Department policy and guidance and to selected best practices from GAO's *Cost Estimating and Assessment Guide* and *Schedule Assessment Guide.*

We also interviewed program officials and reviewed program documentation to understand the roles, responsibilities, and membership of BAS' executive oversight.

In addition, we assessed internal controls that were significant to our objective. As part of this audit, we examined management control plans, such as the BAS Executive Board charter, DAO 208-16 *(Acquisition Project Management)*, *DOC Scalable Acquisition Project Management Guidebook*, Commerce Acquisition Regulations, BAS contract and performance work statement, and other documents. We assessed the implementation of internal controls through document reviews and interviews to determine adherence to procedures and plans. The findings and recommendations in this report resulted from our assessments of internal controls.

In satisfying our objective, we did rely on some computer-processed data: the program's schedule. We tested the data reliability of the schedule and interviewed program staff to understand their practices for creating and maintaining it. We determined that the schedule data were sufficiently reliable to support our findings. Although we could not independently verify the reliability of all the information we collected, we compared it with other available supporting documents to determine data consistency and reasonableness. Based on these efforts, we believe the information we obtained is sufficiently reliable for this report.

We conducted our review from August 2022 through August 2023 under the authority of the Inspector General Act of 1978, as amended (5 U.S.C. §§ 401–424), and Department Organization Order 10-13, dated October 21, 2020. We performed our fieldwork remotely from Colorado, Illinois, Maryland, and New York.

We conducted this performance audit in accordance with generally accepted government auditing standards. These 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 objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective.

Appendix B: Potential Monetary Benefits

The table below presents the estimated costs of project management services over fiscal year 2024 and part of fiscal year 2025. Implementing recommendation 5 will enable the program to obtain more value from the contractor's services and thus put these funds to better use.

Finding and Recommendation	Funds to Be Put to Better Use
Finding II.C and recommendation 5	$1,905,622

Source: OIG analysis of BAS program documentation

Appendix C: Agency Response

The Department's response to our draft report follows on p. 17.

UNITED STATES DEPARTMENT OF COMMERCE
Office of the Chief Financial Officer and
Assistant Secretary for Administration
Washington, D.C. 20230

MEMORANDUM FOR: Frederick J. Meny, Jr.
                          Assistant Inspector General for Audit and Evaluation
                          U.S. Department of Commerce
                          Office of Inspector General

FROM: Jeremy Pelter   JEREMY PELTER Digitally signed by JEREMY PELTER
                                                     Date: 2024.02.01 17:38:36 -05'00'
                   Deputy Assistant Secretary for Administration, performing the non-
                   exclusive functions and duties of the Chief Financial Officer and
                   Assistant Secretary for Administration
                   U.S. Department of Commerce

SUBJECT: Department of Commerce Office of the Secretary's Concurrence to the
                   Office of Inspector General's Draft Report, *The Department Needs to*
                   Improve Oversight to Ensure the Success of Its Financial System
                   Modernization (December 21, 2023)

DATE: February 1, 2024

This memorandum serves as the Department of Commerce (DOC)'s response to the Office of Inspector General (OIG) draft report entitled *The Department Needs to Improve Oversight to Ensure the Success of Its Financial System Modernization (December 21, 2023)*. Thank you for the opportunity to review the draft report and provide these comments.

DOC acknowledges and understands the findings and issues identified in the OIG's draft report and accepts its recommendations. Throughout the initial implementation phase of the program, the Department has been taking steps to address and improve the Business Applications Solution (BAS) implementation process, including, but not limited to, coordinating among BAS, NOAA, and the contractor to address outstanding operational issues associated with the transition of NOAA's financial operations to BAS, identifying lessons learned, and implementing appropriate solutions in future phases of the program. While more work remains to be done, DOC is committed to improving the processes surrounding its multi-phased implementation of BAS—including through further implementation of the draft report's recommendations—and delivering the new enterprise system the program was established to deploy, operate, and maintain. DOC will document the progress it has made, as well as further corrective actions it plans to take, in a comprehensive action plan.

DOC thanks OIG for its engagement with the BAS Program, and looks forward to continuing to work together on these, and related, matters.

Should you have any questions, please contact please contact MaryAnn Mausser, Commerce GAO/OIG Audit Liaison at (202) 482-8120 or mmausser@doc.gov.

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