

The Department's Vision for an Enterprise Grants Management System Has Not Been Realized

REPORT NO. OIG-25-025-A

JUNE 30, 2025

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





June 30, 2025

MEMORANDUM FOR: Paul M. Dabbar
Deputy Secretary of Commerce

FROM: Kevin D. Ryan
Acting Assistant Inspector General for Audit and Evaluation

SUBJECT: *The Department's Vision for an Enterprise Grants Management System Has Not Been Realized*
Report No. OIG-25-025-A

Attached is the final report on our audit of the U.S. Department of Commerce's Grants Enterprise Management System project implementation. We will post the report on [our website](#) per the Inspector General Act of 1978, as amended (5 U.S.C. §§ 404, 420).

Within 60 calendar days, please provide an action plan addressing the report's recommendations, as required by Department Administrative Order 213-5.

Any nongovernmental organization or business entity specifically identified in this report can submit a written response to clarify or provide additional context on any specific reference (Pub. L. No. 117-263, § 5274). The response must be submitted to Director for Audit and Evaluation Frank Tersigni at ftersigni@oig.doc.gov and OAE_Projecttracking@oig.doc.gov within 30 days of the report's publication date. We will post the response on our website as well. If the response contains any classified or otherwise nonpublic information, the organization should identify the information and provide a legal basis for redacting it.

We appreciate your staff's cooperation and professionalism during this audit. If you have any questions or concerns about the report, please contact me at 202-750-5190 or Frank Tersigni at 202-793-2939.

Attachment





Report Highlights

The Department's Vision for an Enterprise Grants Management System Has Not Been Realized

Audit Report OIG-25-025-A

June 30, 2025

➤ **What We Audited** | Our objective was to assess the U.S. Department of Commerce's management and implementation of the Grants Enterprise Management System (GEMS) project.

➤ **Why This Matters** | The GEMS project was established in 2020 to replace legacy grants management systems used by the Department's seven grantmaking bureaus with a modern, enterprise-wide solution. However, the transition to GEMS has been delayed, leading some bureaus to contract for separate grants management solutions. These alternative solutions have increased costs for grants management systems to more than four times higher than planned.

➤ **What We Found** | Inadequate coordination and ineffective planning early in the project significantly affected the Department's ability to deliver an enterprise-wide grants management solution as intended. Specifically, we found that:

- Bureaus have procured multiple systems to manage grants
- Bureaus did not follow Department IT investment review and governance processes before contracting for alternative grants management systems
- The GEMS project should improve its management of requirements, cost, and schedule
- The National Oceanic and Atmospheric Administration's (NOAA's) transition to GEMS provided lessons for future transitions

➤ **What We Recommend** | We made 10 recommendations to the Department to reconcile the extent to which GEMS can meet the bureaus' grants management requirements, consolidate those functions in GEMS where possible, improve IT investment controls, train personnel on IT investment policy and procedures, assess the GEMS project's workforce needs, and incorporate lessons learned from NOAA's GEMS implementation. The Department concurred with our recommendations and is working to implement them.



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Introduction

The U.S. Department of Commerce’s (the Department’s) Grants Enterprise Management Solution (GEMS) project was established in 2020 to replace legacy grants management systems used by the Department’s seven grantmaking bureaus with a modern, modular, enterprise-wide solution.

Prior to the adoption of GEMS and other systems, Department grantmaking bureaus employed a combination of manual processes and disparate grants management systems that lacked functionality to manage the full grants life cycle¹ and had unsupported software.² The National Oceanic and Atmospheric Administration (NOAA) operated, and the National Institute of Standards and Technology (NIST) continues to operate, legacy grants management systems to support their own grant programs and those of the other five grantmaking bureaus: the U.S. Economic Development Administration (EDA), the National Telecommunications and Information Administration (NTIA), the International Trade Administration, the U.S. Census Bureau (Census Bureau), and the Minority Business Development Agency (MBDA). NOAA’s and NIST’s support—a combination of systems and services for other bureaus’ grant programs—is referred to as cross-servicing. In addition to receiving cross-servicing support from NOAA, EDA operated two other legacy systems to manage its revolving loan fund and construction grants.³

The 2019 sponsor commitment letter for GEMS, signed by officials of the Department, NOAA, NIST, and EDA, stated that the Department needed a new solution that “subsumes existing systems . . . data, business rules, [and] process workflows” and provided new functionality to address both existing gaps and external mandates.⁴ The letter stated that GEMS’ success would be measured by:

1. Increases in the quality of customer experiences.
2. Increases in the effectiveness or efficiency of bureaus’ grantmaking operations.
3. Reduction of cost and risks of its life cycle.

¹ A typical grant life cycle consists of the pre-award, award, post-award, close-out, and post-closeout phases.

² This refers to software that has reached its end of life and is no longer supported by the vendor with security and other updates, making it inherently risky to operate.

³ The Department’s legacy grants management systems were NOAA’s Grants Online, NIST’s Grants Management Information System, and EDA’s Operations Planning and Control System and Revolving Loan Fund Management System.

⁴ U.S. Department of Commerce, September 5, 2019. *GEMS Commitment Letter, Version 1*, 6 (Supporting Milestone 1).

4. Operating units' development of agile competencies and GEMS' rapid adaptation in response to mandates and new innovations.⁵

Likewise, the Department's current strategic plan, which extends through 2026, includes an objective to modernize mission support processes and infrastructure, with GEMS deployment being a key performance indicator.⁶ This followed from the prior strategic plan, which included a strategy to consolidate information technology (IT) and noted that "legacy IT systems and fragmented technical approaches are costly to taxpayers and compound the challenges of managing cybersecurity risks" and that "IT modernization also creates opportunities for significant acquisition savings through economies of scale."⁷

GEMS Project Background

In 2017, the Department began collecting requirements for the GEMS project from NOAA, NIST, and EDA. At the time, these three bureaus awarded the largest portion of the Department's grants. In 2019, the GEMS project worked with these bureaus to develop a common set of grants management processes. In 2020, the project consulted with the Grants Quality Service Management Organization (QSMO) within the U.S. Department of Health and Human Services, as required by the Office of Management and Budget (OMB), for advice to avoid duplicate costs, implement grants data standards, and consider marketplace solutions.⁸

In 2021, after evaluating alternatives, the Department chose electronic Research Administration (eRA), a federal shared-service solution developed and hosted by the National Institutes of Health (NIH), as the GEMS grants management system.⁹ The GEMS project initially estimated the life cycle cost for development, operation, and support of the system to be \$73.6 million over fiscal years (FYs) 2019 to 2033. As of February 2025, however, the life cycle cost has increased to \$105 million.

GEMS Transition Schedule

The Department's initial plan was to transition NOAA and its cross-serviced bureaus in the first quarter of FY 2023, EDA in the third quarter of FY 2023, and NIST and its cross-serviced

⁵ *Ibid*, 6.

⁶ DOC, n.d. *Strategic Plan 2022–2026*. Washington, DC: DOC, 73. Available at <https://www.commerce.gov/sites/default/files/2022-03/DOC-Strategic-Plan-2022%E2%80%932026.pdf> (accessed September 24, 2024).

⁷ DOC, n.d. *Strategic Plan 2018–2022*. Washington, DC: DOC, 27. Available at https://www.commerce.gov/sites/default/files/us_department_of_commerce_2018-2022_strategic_plan.pdf (accessed September 24, 2024).

⁸ Office of Management and Budget, April 26, 2019. *Centralized Mission Support Capabilities for the Federal Government*, OMB M-19-16. Washington, DC: OMB, 4.

⁹ In this report, when we refer to GEMS as a system, we are referring to eRA.

bureaus in the first quarter of FY 2024. To reduce the need for manual processing of grant awards, the Department planned the transitions to coincide with the bureaus' transitions to the Business Applications Solution (BAS) financial system.

However, the Department's BAS program itself had challenges that delayed NOAA's transition to the new financial system until October 2023,¹⁰ which in turn delayed NOAA's transition to GEMS. Due to the Department's challenges with the BAS financial system and the expected volume of grants under the CHIPS and Science Act of 2022 (CHIPS Act) and Infrastructure Investment and Jobs Act (IIJA), NIST's transition was postponed until October 2026, along with Census Bureau grants that are cross-serviced by NIST. (See appendix 2 for GEMS transition timelines.)

In addition to the schedule challenges, between 2020 and 2023, EDA, NTIA, and NIST acquired separate grants management systems to address their time-sensitive needs for increased grant intake and review, grantee communication, and reporting requirements. These requirements stemmed from the need to award and disburse funds from the Coronavirus Aid, Relief, and Economic Security Act; American Rescue Plan Act of 2021; IIJA; and CHIPS Act. Of these three bureaus, EDA has procured the most comprehensive solution for grants management. Its transition to GEMS has been postponed to an undetermined date.

Oversight of the GEMS Project

The GEMS project manager, who reports to the Department's Office of the Chief Information Officer (OCIO), makes operational and tactical decisions and escalates issues to the GEMS Governance Board as needed. The board provides executive oversight for the GEMS project and makes decisions elevated to it by the GEMS project manager. Department executives on the board are the Senior Procurement Executive and Director of Acquisition Management; the Deputy Chief Financial Officer; and the Chief Information Officer (CIO). Board membership from the bureaus consists of NIST's and EDA's Chief Financial Officers; NOAA's Director of Acquisitions and Grants; and NOAA's and NIST's CIOs. The Department's CIO and Senior Procurement Executive and the NOAA and NIST CIOs are also part of the separate Commerce IT Review Board (CITRB), which is chartered to oversee bureaus' major IT investments (i.e., non-GEMS solutions; see finding II).

¹⁰ See DOC Office of Inspector General, February 22, 2024. *The Department Needs to Improve Oversight to Ensure the Success of Its Financial System Modernization*, OIG-24-014-A. Washington, DC: DOC OIG.

► Objective

Our objective was to assess the Department's management and implementation of the GEMS project. Appendix 1 details our scope and methodology.



Findings and Recommendations

Summary: We found that inadequate coordination and ineffective planning early in the project (circa 2020-2022, as described below) significantly affected the Department's ability to deliver an enterprise-wide grants management solution as intended. Specifically, we found that

- Bureaus have procured multiple systems to manage grants.
- Bureaus did not follow Department IT investment review and governance processes before contracting for alternative grants management systems.
- The GEMS project should improve its management of requirements, cost, and schedule.
- NOAA's transition to GEMS provided lessons for future transitions.

With some bureaus using alternative solutions, costs for grants management systems are more than four times higher than planned. By not following procedures to review and approve IT investments, the Department missed opportunities to examine whether EDA's, NIST's, and NTIA's systems align with strategic plans, support mission requirements, comply with enterprise architecture guidance, minimize project risk, and demonstrate value. Further, the GEMS project's lack of internal controls has hampered its ability to manage requirements and avoid cost increases and schedule delays. Finally, the Department should draw lessons from GEMS challenges to ensure future success.

➤ Bureaus Have Procured Multiple Systems to Manage Grants

The Department intended for GEMS to be an enterprise-wide solution. However, as early as 2018, EDA had begun investing in its own system capabilities for managing grants. It was not until 2 years later, in 2020, that the GEMS project collected requirements from NOAA, NIST, and EDA. Around that time, EDA presented a plan to the GEMS governance board to develop its own grants management system, which would interface with GEMS later. Initially, these capabilities were for customer relationship management and other needs

that the bureaus believed GEMS could not support. However, EDA pursued a more comprehensive alternative grants management solution.

In 2022, EDA contracted to develop the Economic Development Grants Experience (EDGE) on the Salesforce platform.¹¹ According to EDA officials, the GEMS system (eRA) could not meet all the bureau's requirements (in particular, the ability to manage construction grants).¹² In addition, EDA announced it had an immediate need to award and manage grant programs funded by the American Rescue Plan Act of 2021,¹³ which the GEMS project could not support in the required timeframe. To date, however, EDA and the GEMS project have not determined whether EDGE will interface with GEMS or if EDA's grants data will otherwise be consolidated in GEMS.

NIST and NTIA have also separately developed features in Salesforce platforms for grants intake and review, communication with grant applicants, and reporting related to their IJJA grant programs, including the Broadband Equity, Access, and Deployment program.¹⁴ According to NIST and NTIA officials, they do not believe GEMS has features to support these activities and there are no plans for the bureaus to transition these functions to GEMS.¹⁵ The governance board was briefed on EDA's, NTIA's, and NIST's consideration of alternative systems, but it never affirmatively voiced a decision on the bureaus' use of separate grants management capabilities. Therefore, the board did not prevent EDA, NTIA, and NIST from using separate grants management systems.

NIST and its cross-serviced bureaus (including NTIA) planned to transition other grants managed in their legacy system to GEMS in FY 2025, but this has been postponed due to the Department's decision to postpone NIST's transition to the new BAS financial system until October 2026. In addition, in 2023, NIST and NTIA requested that the GEMS project develop an interface between their Salesforce systems and GEMS, but efforts for this have been postponed until the 2026 transition timeframe.

¹¹ Salesforce is a company that provides cloud-based customer relationship management software.

¹² See finding III.A. for additional discussion of the GEMS project's management of requirements. GEMS does in fact have construction grant functionality—NTIA uses it for the Tribal Broadband Community Program construction grants that transitioned to GEMS with NOAA's grants. During the NIST transition, NTIA will migrate additional construction grants to GEMS for the Broadband Infrastructure; Broadband Equity, Access, and Deployment; and Enabling Middle Mile Broadband Infrastructure programs.

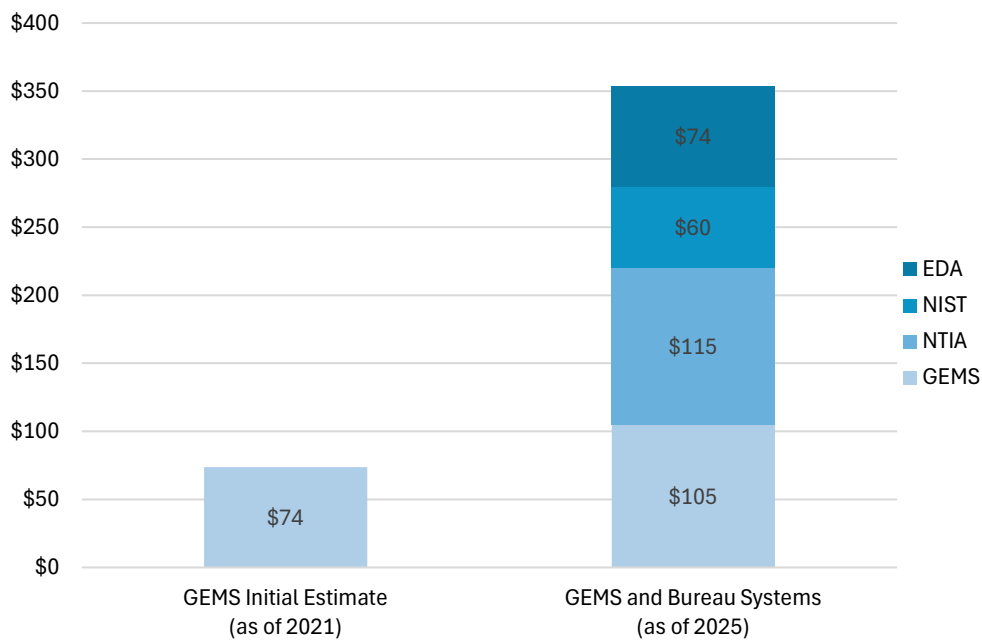
¹³ Pub. L. No. 117-2, 135 Stat. 4.

¹⁴ See DOC National Telecommunications and Information Administration. *Broadband Equity Access and Deployment Program* [online]. <https://broadbandusa.ntia.doc.gov/funding-programs/broadband-equity-access-and-deployment-bead-program> (accessed September 18, 2024).

¹⁵ These include program office management functions such as application intake and review, report intake and review, customer relationship functions, structured data collection and specialized reporting, programmatic tracking, analytics, and assessment of grant programs.

In August 2024, the GEMS project requested authority for an additional \$22.5 million above its previous cost estimate of \$73.6 million to cover additional requirements, including interfaces with NIST and NTIA systems.¹⁶ Since then, the project updated its life cycle cost estimate, which now totals \$105 million from FY 2019 to FY 2033. As a result of the schedule delays and procurement of alternative systems, the total cost for the Department's new systems supporting grants management has more than quadrupled to \$354 million (see figure 1).

Figure 1. Estimated Costs for Department Grants Management Systems
(in millions)



Source: Department-provided cost information as of February 2025

Notes: (1) Dollar amounts have been rounded to the nearest million. (2) EDA, NIST, and NTIA systems are features of, or applications developed by, Salesforce.

The Department states that it still intends to fully implement GEMS as the single solution for all grant-making bureaus. This will require significant replanning, time, and additional cost given that bureaus' requirements have likely evolved with their new grants programs. In addition, now that bureaus are managing grants in separate systems, the Department will need to assess whether and when it should migrate such grants to GEMS or integrate

¹⁶ GEMS has been funded through the Nonrecurring Expense Fund. In January 2025, the Senate Committee on Appropriations approved \$10 million from the fund for GEMS in FY 2025 and directed the Department to brief the Committee on what it will do to control costs and requirements.

those systems with it. In short, the Department's grants management requirements and architecture will need significant reevaluation and systems engineering.

In the meantime, the Department will not realize the full benefits it intended with GEMS. EDA, NTIA, and NIST plan to continue using their own separate systems until the grant programs currently managed in those systems have concluded (in approximately 2033). Until either the bureaus' systems are integrated with GEMS or they fully transition their grant-making activities to GEMS, the bureaus must implement manual workarounds to process grant payments through the Department's financial systems, which presents a risk of errors. In addition, the Department will have fragmented grants records, possibly leading to inconsistent reporting, and grants processes will not be harmonized as intended through the GEMS project.

EDA, NIST, and NTIA did not engage with the GEMS project to determine whether and how GEMS could satisfy their new requirements, in some cases due to the need to quickly deploy capabilities to meet statutory timelines for new grant programs. Additionally, the GEMS governance board directed the project to focus on activities to transition NOAA to the new system and postpone analysis of new requirements until that transition was complete.

Recommendations

We recommend that the Deputy Secretary ensure that EDA, NIST, NTIA, and the GEMS project:

1. Reconcile the extent to which those bureaus' grants management requirements can be met by GEMS.
2. Develop plans, cost estimates, and schedules to consolidate grants management to the extent possible in GEMS, in accordance with Department goals.

➤ Bureaus Did Not Follow Department IT Investment Review and Governance Processes Before Contracting for Alternative Grants Management Systems

The Department's OCIO oversees an IT review program intended to ensure that proposed, active, and completed investments continually contribute to the Secretary's strategic vision, Departmental and Bureau mission requirements, employ sound program management methodologies and metrics, comply with Departmental policies, align with appropriate Department and Bureau

enterprise architectures, employ sound information security and risk management practices and measures, and provide the highest return on the investment . . .¹⁷

Within this program, the CITRB is required to review major IT investments with life cycle costs of \$10 million or more. The CITRB approves or disapproves requests for IT Investment Authorities (ITIAs), which are required before a bureau or office may enter into a contract. We found that EDA, NIST, and NTIA failed to obtain ITIAs before contracting for alternative grants management systems, each of which exceeds the \$10 million threshold for major IT investments.

In addition, when developing new or modernized technology, OMB requires agencies to consult with the relevant QSMO prior to buying and developing a new system.¹⁸ However, none of these three bureaus worked with the Grants QSMO prior to making their investments. EDA and NTIA did meet with the QSMO in July 2022 to discuss aspects of using Salesforce applications—after they had begun their investments.

¹⁷ DOC OCIO, (April 1, 2020). Information Technology Review Program Charter Version 2.0. Washington, DC: DOC, 1.

¹⁸ For the requirement that agencies consult with the relevant QSMOs, see (1) OMB M-19-16, 3-4; (2) OMB, March 19, 2021. Promoting Public Trust in the Federal Government through Effective Implementation of the American Rescue Plan Act and Stewardship of the Taxpayer Resources, M-21-20. Washington, DC: OMB, 3; and (3) OMB, April 29, 2022. Advancing Effective Stewardship of Taxpayer Resources and Outcomes in the Implementation of the Infrastructure Investment and Jobs Act, M-22-12. Washington, DC: OMB, 8.

Table 1. Bureau Investments and Related Department Policy Tasks

Bureau	Began Contracting	Initiated CITRB Review	Obtained an ITIA	Reported IT Investment Information for ITDashboard.gov
EDA	January 2020	December 2022 ^a	No	No
NIST	October 2022	No ^b	No	Yes
NTIA	January 2022	August 2024 ^c	November 2024 ^d	No

Source: OIG review of contract data and CITRB/Capital Planning and Investment Control program data and policies

^a EDA's CITRB review has been on hold since January 2023.

^b NIST intends to submit necessary information for CITRB review by the fourth quarter of FY 2025.

^c NTIA completed the Department's CIO review in October 2024.

^d In its response to our draft report, NTIA stated it obtained a limited ITIA for \$81.1 million in November 2024.

As a result, there has not been an adequate examination as to whether the bureaus' investments are aligned with strategic plans, support mission requirements, comply with enterprise architecture guidance, minimize project risk, and demonstrate value in accordance with the Department's IT review program. At a minimum, the bureaus' additional investments do not comport with the Department's original vision for GEMS and have required significant costs and replanning to address. In addition, the GEMS project now has additional work to determine whether and how to integrate the bureaus' alternative systems with its intended enterprise solution.

Several factors contributed to these failures. An OCIO official acknowledged that the alternative grants management system acquisitions, especially EDA's, did not follow policy and characterized them as "missteps" by the Department. In December 2022, almost 3 years after its initial investments in Salesforce applications, EDA took steps to initiate a CITRB review. OCIO required additional documents from EDA, including details of its unique system requirements (as compared with GEMS), to inform and proceed with the review. However, EDA did not provide such documentation and no CITRB review was completed. We found that EDA's lack of an OCIO may have contributed to an inadequate understanding of, and compliance with, Department IT acquisition processes and a failure to consult with the Grants QSMO ahead of time. The Office of the Secretary provides OCIO services to EDA through a memorandum of understanding. However, that memorandum does not address IT investment program responsibilities.

NIST and NTIA did not provide explanations for their lack of ITIAs. Instead, NIST officials told us that they are in the process of obtaining an ITIA. However, as of September 2024, NIST had not requested a CITRB review. In August 2024, NTIA requested an “emergency” CITRB review (due to its lateness) for its alternative grants management system.

Finally, bureaus are required to submit IT investment information to OMB’s IT Dashboard.¹⁹ However, we learned that EDA and NTIA had not submitted information for their grants management systems, which further reduces the oversight and accountability of these major IT investments. The Department’s OCIO told us that bureaus have not consistently complied with Department procedures for such reporting.²⁰

Recommendations

We recommend that the Deputy Secretary ensure that the OCIO:

3. Reviews the adequacy of the Department’s system of internal control (policies, procedures, and governance bodies) for major IT investments and makes changes to ensure operating units comply with policy and procedures and appropriate officials are held accountable for compliance.
4. Reviews the adequacy of EDA’s system of internal control of IT investments provided both through its memorandum of understanding with the Office of the Secretary for OCIO services and other applicable means (policies, procedures, and governance bodies).
5. Conducts training on IT investment policy and procedures and QSMO requirements for appropriate personnel.

➤ The GEMS Project Should Improve Its Management of Requirements, Cost, and Schedule

Government programs and projects must employ effective management practices to control costs, schedule, and performance while delivering requirements. We found that

¹⁹ OMB, August 2023. *Preparation, Submission, and Execution of the Budget*, Circular No. A-11. Washington, DC: OMB, 157. “As provided in this section, agencies must submit their IT budget and IT portfolio summary and detail reports annually to OMB via the Federal IT Dashboard.”

²⁰ See DOC OIG, August 27, 2024. *A Lack of Program Management Controls and Attention to IT Security Threatens the Success of NOAA’s Effort to Implement a Cloud-Based Common Ground System*, OIG-24-034-A. Washington, DC: DOC OIG, 7.

GEMS project management practices are inadequate to ensure its success and that the lack of expertise in enterprise architecture and cost estimation are key contributing factors.

The project's management of requirements is inadequate

The U.S. Government Accountability Office's (GAO's) guide for Agile²¹ development states that additions and refinements to requirements should be managed efficiently and effectively in a prioritized requirements list.²² However, to meet its implementation timeline, the GEMS project did not carry out a thorough requirement gathering cycle and did not prioritize or analyze requirements for phases beyond its NOAA transition.²³

In early FY 2023, NIST discussed new requirements with the GEMS project for an interface with NIST's grants intake application and for processing grants awarded for the CHIPS Act incentives program.²⁴ However, the project's focus was on the NOAA transition and, at the direction of the GEMS governance board, it delayed prioritizing and analyzing these requirements.

In addition, the project considered EDA's requirements for construction grants and revolving loan fund grants in 2020. The project identified these as "gaps" that the current configuration of GEMS could not support and deferred its analysis and prioritization of EDA's requirements until the bureau's transition phase, which has now been postponed indefinitely.

Further, requirements should be traceable from a source requirement to the final work product (and, in reverse, from a work product to its source requirement).²⁵ Establishing clear traceability ensures that work flows from approved source requirements and contributes to all levels of program goals and objectives.²⁶ However, we found that the project maintains requirements that are not traceable to work products. Specifically, the project's method for tracing requirements—a "fit gap analysis"—only contains high-level

²¹ In Agile, a program accomplishes work—planned in advance and prioritized by customer feedback—within a predefined, time-boxed, and recurring period, or *sprint*. The GEMS project must employ these Agile processes in concert with the system provider, NIH.

²² U.S. Government Accountability Office, September 28, 2020. *Agile Assessment Guide: Best Practices for Agile Adoption and Implementation*, GAO-20-590G. Washington, DC: GAO, 80 (Table 7, Manage and refine requirements).

²³ NIH eRA operates in an Agile environment. In Agile development, requirements backlogs should be prioritized so that Agile teams are ready to implement the requirements at the start of a phase.

²⁴ For the CHIPS Act incentives program, NIST uses "Other Transaction Authority," a type of award issued by the federal government that is not a contract, cooperative agreement, or grant.

²⁵ Software Engineering Institute, November 2010. *Capability Maturity Model® Integration for Acquisition*, version 1.3. Pittsburgh, PA: SEI, 329.

²⁶ See 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, 8.

business processes, rather than actual requirements, and indicates whether those processes were supported (“fit”) or not supported (“gaps”) in the GEMS system as of September 2020.

If the GEMS project does not analyze and sufficiently prioritize requirements for subsequent phases ahead of time, the project’s ability to plan and deliver those requirements will likely be compromised, resulting in delays or additional instances where bureaus seek alternative solutions. Without adequate traceability of requirements, the project lacks a reliable means to track the progress of system development efforts to meet high-level requirements.

A factor contributing to these deficiencies is that the GEMS project has lacked an enterprise architect to analyze requirements for future onboarding phases. Enterprise architects capture and contextualize information and data regarding mission areas, business operations, functions, capabilities, and supporting technologies. This enables the evaluation and prioritization of new requirements, which is a key activity of Agile system development efforts and is needed to make progress toward Department goals for an enterprise grants management system.

The project lacks a reliable cost estimate

The Department’s acquisition policy requires programs and projects to develop and regularly update a life cycle cost estimate. To be properly constructed, this estimate should include all costs for the life cycle of the project and be supported with a cost analysis requirements description and a work breakdown structure.²⁷

Officials told us the project generated its estimate using historical information from other federal shared services projects, analyses of different scenarios, and estimates provided by the NIH for system functionality that had not yet been developed in its eRA system. However, the project estimate was based on high-level functionality, and the project did not support its estimate with sufficient detail for analysis. For example, the project lacked a cost analysis requirements description, a work breakdown structure, and other supporting documentation that would provide a basis for the estimate.

Since the initial estimate of \$73.6 million, estimated costs have increased more than 42 percent to \$105 million due to newly identified requirements and previously underestimated or unincluded project activities. However, this new estimate does not account for additional planned activities, such as training and change management efforts.

²⁷ See DOC, May 26, 2015. *Acquisition Project Management*, DAO 208-16. Washington, DC: DOC: 3.03(a)(1), 4.03, 4.04, and 5.04(a). Available online at https://www.commerce.gov/opog/directives/DAO_208-16 (accessed August 2024); and DOC Office of Acquisition Management, December 2022. *DOC Cost Estimating Guide*, version 1. Washington, DC: DOC, 21, 41.

Further, because of the lack of supporting documentation, we could not validate whether costs for the full scope of the GEMS implementation have been accounted for in the estimate.

As a result of its cost estimating deficiencies, the project cannot reliably estimate and control costs through the identification of cost drivers. This presents a risk of further cost increases for GEMS.

We found several reasons for these deficiencies. First, despite the intention set out in the project's sponsor commitment letter that the GEMS governance board "shall advance the project through all relevant decision-making and oversight bodies,"²⁸ there is no evidence the board did so. Notably, the project was not reviewed and approved for implementation by the CITRB, which would normally assess the project's cost estimate. In addition, the project lacks staff with cost-estimating expertise.

The project's schedule management processes need improvement

Department acquisition policy requires programs and projects to develop and regularly update a schedule.²⁹ A best practice is the use of an integrated master schedule for managing and monitoring schedule performance. This requires a work breakdown structure to gauge the effort at a task level. The amount of detail in the work breakdown structure helps in developing realistic schedules³⁰ and minimizes the need for management reserve.³¹

The GEMS project, however, does not maintain an integrated master schedule or any other schedules based upon a work breakdown structure. Instead, the project relies on schedules provided by NIH, which are shared monthly and contain updates on its expected completion of high-level milestones. As a result, the GEMS project lacks (1) sufficient insight into progress fulfilling system requirements and (2) an integrated view of all activities involved in preparing for bureau transitions to the new system (including change management, training, support activities, decommissioning of legacy systems, etc.).

The GEMS project has not defined effective schedule control processes for managing activities and measuring progress. As a result, the Department cannot adequately monitor its progress and identify and manage risks.

²⁸ DOC *GEMS Commitment Letter*, 8.

²⁹ See (1) DAO 208-16, 3.03, 3.03(b), 4.03, and 6.02; and (2) DOC, August 2015. *DOC Scalable Acquisition Project Management Guidebook*, version 1.2. Washington, DC: DOC, 153.

³⁰ GAO, March 2020. *Cost Estimating and Assessment Guide: Best Practices for Developing and Managing Program Costs*, GAO-20-195G. Washington, DC: GAO, 56.

³¹ SEI *CMMI*, 283.

Recommendations

We recommend that the Deputy Secretary:

6. Assess the GEMS project's workforce needs and take appropriate steps as indicated.
7. Ensure the project defines and implements management controls for requirements in accordance with GAO's *Agile Assessment Guide*.
8. Ensure the project has support for cost estimation and better defines and implements its cost management controls in accordance with the Department's *Cost Estimating Guide*.
9. Ensure the project defines and implements management controls for its schedule in accordance with the Department's administrative order on Acquisition Project Management (208-16) and GAO best practices.

➤ NOAA's Transition to GEMS Provided Lessons for Future Transitions

The GEMS project completed the following activities in preparation for the transition of NOAA and its supported grant-making bureaus to GEMS in October 2023:

- Data migrations from NOAA's legacy system to GEMS.
- User acceptance testing (UAT) between April 2023 and December 2023.
- User training with self-guided webinars.

We learned of several challenges in NOAA's transition that present opportunities for improvement in the follow-on transitions for NIST and, possibly, EDA.

During NOAA's transition to GEMS, system users faced challenges because of inadequate training, lack of technical "help desk" support, and problems with system roles and permissions. The lack of training on how to complete necessary steps in GEMS to award grants increased the amount of time it took for grant program offices to complete actions in the system. NOAA staff stated that they did not understand their assigned roles in the GEMS system and could not view all the award information that had been available to them in the legacy system. In addition, staff stated that they did not understand new business processes to be employed with GEMS.

The project officials have acknowledged training inadequacies. In addition, project officials pointed to the fact that the timing of NOAA's transition to the BAS financial system in

October 2023 and its transition to GEMS a few days later limited the extent of user testing and training with “live” data in GEMS. The Department should examine whether there are lessons to be learned from the UAT conducted before the transition. Further, the lack of a documented concept of operations for GEMS likely hindered staff’s ability to understand new GEMS processes.

Best practices state that a program or project should identify lessons learned and use them as inputs or ways to revise planning and risk management processes, identify risks, and define and track corrective actions to closure.³² The Department should employ these best practices to ensure the success of GEMS over the long term.

Recommendation

We recommend that the Deputy Secretary:

10. Ensure the Department collects lessons learned from NOAA’s GEMS implementation and incorporates those lessons into plans and procedures for the NIST and EDA implementations.

³² SEI *CMMI*, 71–72, 201, 211–212, 303–305, 333–334, 403.



Conclusion

The Department has not realized its vision for an enterprise grants management solution as defined in the GEMS sponsor commitment letter. Instead of GEMS subsuming existing systems into one, new grant programs and planning deficiencies led to the procurement of multiple systems to support bureaus' grant management needs—with corresponding increases in overall costs and an estimated 42 percent increase in costs for GEMS alone. Our review identified shortcomings in the Department's governance of IT investments and program management practices that it must address to ensure efficient use of resources for grants management systems going forward. The Department must also learn and implement in future transitions the lessons from NOAA's transition to GEMS. Given the Department's continued intention to fully implement GEMS as the single solution for all grant-making bureaus, addressing our recommendations will promote the Department's ability to meet the success criteria it has defined for the project.



Summary of the Department's Response and OIG Comments

The Department reviewed a draft version of this report and responded to our findings and recommendations. In its response, the Department concurred with all of our recommendations and described actions it has taken or plans to take to address them. The Department's response is included in this report as appendix 3.

The GEMS project management office, EDA, NIST, and NTIA also provided technical comments on the draft report. We considered those comments and revised the report where appropriate.

We are pleased that the Department concurs with our recommendations and look forward to reviewing its action plan.



Appendix 1. Scope and Methodology

Our objective was to assess the Department’s management and implementation of the GEMS project. To meet this objective, we examined the Department’s oversight of the project; assessed the project’s cost, schedule, and performance controls; and reviewed aspects of the project’s system implementation efforts for NOAA. We also examined aspects of bureaus’ acquisitions of alternative grants management systems.

To examine Departmental oversight of the project, we reviewed Departmental policies to identify cost and schedule development requirements for IT programs and projects and the artifacts used to support these requirements. We also examined monitoring activities and artifacts for the project, such as governance board briefings, executive council reports, NIH’s eRA performance reports, and GEMS project monthly status reports.

To assess the project’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 selected best practices from GAO’s *Cost Estimating and Assessment Guide* and *Schedule Assessment Guide*.

We also interviewed project officials and reviewed project documentation to understand the roles, responsibilities, and membership of GEMS’ executive oversight board.

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 GEMS Governance Board charter, Department Administrative Order 208-16 (*Acquisition Project Management*), *DOC Scalable Acquisition Project Management Guidebook*, Commerce acquisition regulations, NIH eRA performance documentation, Department IT policies, 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 include our assessments of internal controls.

In satisfying our objective, we did not rely on computer-processed data. 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 October 2023 through February 2025 under the authority of the Inspector General Act of 1978, as amended (5 U.S.C. § 401-424), and Department

Organization Order 10-13, as amended October 21, 2020. We performed our fieldwork remotely.

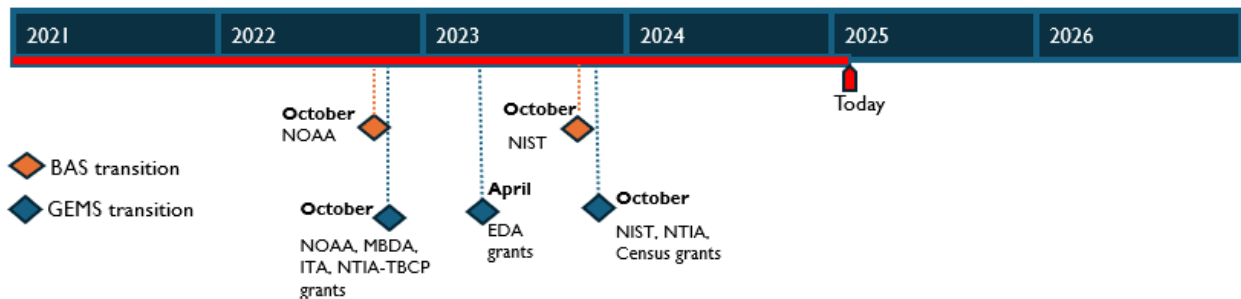
We conducted this performance audit in accordance with generally accepted government auditing standards. These standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective. We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



Appendix 2. GEMS and BAS Transition Timelines

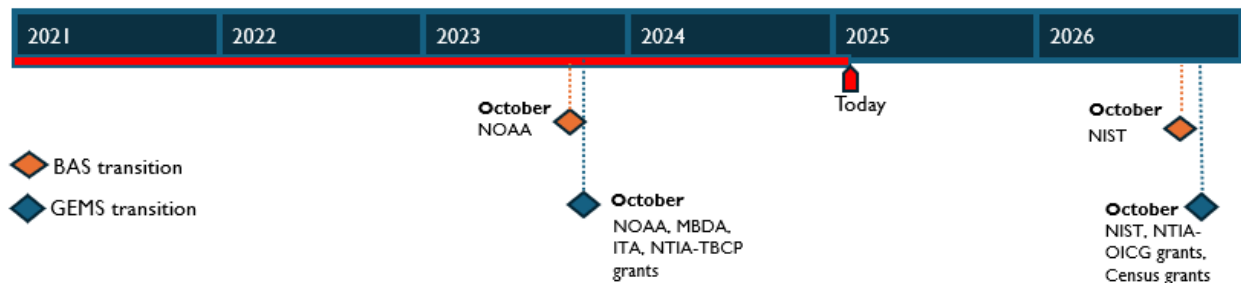
The figures below depict the BAS financial system and GEMS transitions planned for bureaus as of January 2022 and the revised plans as of February 2025. NOAA and its previously cross-serviced bureaus (except EDA) have now transitioned to BAS and GEMS. EDA's transition has been postponed indefinitely.

Figure 2. GEMS and BAS Transition Timeline as of January 2022



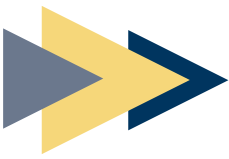
Source: OIG analysis of GEMS project documentation

Figure 3. GEMS and BAS Transition Timeline as of February 2025



Source: OIG analysis of GEMS project documentation

Notes: (1) NTIA's Tribal Broadband Connectivity Program grants were cross-serviced by NOAA and transitioned to GEMS in FY 2024. (2) NTIA's Office of Internet Connectivity and Growth (OICG) grants are cross-serviced by NIST and comprise the Broadband Infrastructure; Connecting Minority Communities; Middle Mile; Digital Equity; and Broadband Equity, Access, and Deployment programs. See NTIA. Office of Internet Connectivity and Growth (OICG) [online]. www.ntia.gov/office/office-internet-connectivity-and-growth-oicg (accessed October 15, 2024).



Appendix 3. Department's Response

The Department's response to our draft report begins on the next page.



**AGENCY COMMENTS ON OIG DRAFT
REPORT**

TO: Kevin Ryan
Acting Assistant Inspector General for Audit and Evaluation

FROM: Brian Epley
Chief Information Officer

BRIAN EPLEY
Digitally signed by BRIAN EPLEY
Date: 2025.04.11 13:30:16 -04'00'

Olivia J. Bradley
Senior Procurement Executive Director for Acquisition Management

OLIVIA
BRADLEY
Digitally signed by OLIVIA
BRADLEY
Date: 2025.04.11 11:17:13 -04'00'

SUBJECT: **Audit Report**-The Department's Vision for an Enterprise Grants Management System Has Not Been Realized.

Report Date: February 24, 2025

Audited Entity: U.S. Department of Commerce, Office of the Secretary

Thank you for the opportunity to respond to the OIG draft report entitled The Department's Vision for an Enterprise Grants Management System Has Not Been Realized. The Deputy Secretary has delegated the response to us.

The Department agrees with the recommendations and will prepare a formal action plan upon issuance of OIG's final report for the following:

Title of Finding I: Bureaus Have Procured Multiple Systems to Manage Grants

- **OIG's Recommendation #1:** Reconcile the extent to which those bureaus' grants management requirements can be met by GEMS.
- **OIG's Recommendation #2:** Develop plans, cost estimates, and schedules to consolidate grants management to the extent possible in GEMS, in accordance with Department goals.

Title of Finding II: Bureaus Did Not Follow Department IT Investment Review and Governance Processes Before Contracting for Alternative Grants Management Systems

- **OIG's Recommendation #3:** Reviews the adequacy of the Department's system of

internal control (policies, procedures, and governance bodies) for IT investments and makes changes to ensure operating units comply with policy and procedures and appropriate officials are held accountable for compliance.

- **OIG's Recommendation #4:** Reviews the adequacy of EDA's system of internal control of IT investments provided both through its memorandum of understanding with the Office of the Secretary for OCIO services and other applicable means (policies, procedures, and governance bodies).
- **OIG's Recommendation #5:** Conducts training on IT investment policy and procedures and QSMO requirements for appropriate personnel.

Title of Finding III: The GEMS Project Should Improve Its Management of Requirements, Cost, and Schedule

- **OIG's Recommendation #6:** Assess the GEMS project's workforce needs and take appropriate steps as indicated.
- **OIG's Recommendation #7:** Ensure the project defines and implements management controls for requirements in accordance with GAO's Agile Assessment Guide.
- **OIG's Recommendation #8:** Ensure the project has support for cost estimation and better defines and implements its cost management controls in accordance with the Department's Cost Estimating Guide.
- **OIG's Recommendation #9:** Ensure the project defines and implements management controls for its schedule in accordance with the Department's administrative order on Acquisition Project Management (208-16) and GAO best practices. Implementing this recommendation and recommendations 7 and 8 will ensure that the \$27 million in estimated GEMS costs for FYs 2026 and 2027 is put to better use through more efficient and effective project execution.

Title of Finding IV: NOAA's Transition to GEMS Provided Lessons for Future Transitions

- **OIG's Recommendation #10:** Ensure the Department collects lessons learned from NOAA's GEMS implementation and incorporates those lessons into plans and procedures for the NIST and EDA implementations.

Technical/Editorial comments are attached.

If you have any questions, please contact Joselyn Bingham, OCIO Audit Liaison, at (202) 482-1323 or email jbingham@doc.gov.



**AGENCY COMMENTS ON OIG DRAFT
REPORT**

TO: Kevin Ryan
Acting Assistant Inspector General for Audit and Evaluation

FROM: Brian Epley **BRIAN EPLEY** Digitally signed by BRIAN EPLEY
Chief Information Officer Date: 2025.05.14 09:07:51 -04'00'

Olivia J. Bradley **OLIVIA BRADLEY** Digitally signed by OLIVIA
Senior Procurement Executive Director for Acquisition Management Date: 2025.05.13 17:55:06 -04'00'

SUBJECT: **Audit Report:** The Department's Vision for an Enterprise Grants Management System Has Not Been Realized.

Report Date: February 24, 2025

Audited Entity: U.S. Department of Commerce, Office of the Secretary

Thank you for the opportunity to respond to the Office of the Inspector General (OIG) draft report titled, *The Department's Vision for an Enterprise Grants Management System Has Not Been Realized*. The Department of Commerce's (the Department) Deputy Secretary has delegated the response to the Office of the Secretary.

The Department agrees with the recommendations and will prepare a formal action plan upon issuance of OIG's final report for the following:

Title of Finding I: Bureaus Have Procured Multiple Systems to Manage Grants

- **OIG's Recommendation #1:** Reconcile the extent to which those bureaus' grants management requirements can be met by GEMS.
- **OIG's Recommendation #2:** Develop plans, cost estimates, and schedules to consolidate grants management to the extent possible in GEMS, in accordance with Department goals.

The Department concurs with the recommendations offered by OIG and offers the following comments:

- **OIG's Recommendation #1:** GEMS PMO implemented weekly requirements review meetings with bureaus in coordination with eRA management team to prevent scope creep. The GEMS and NIH programs are facilitating onboarding requirements gathering meetings on a weekly basis with programs onboarding to the eRA solution.
- **OIG's Recommendation #2:** GEMS PMO incorporated monthly report cadence with NIH illustrating total DM&E cost and any details associated with activities outside scope of work. Spending thresholds have been implemented and are managed by the GEMS Program Manager.

Title of Finding II: Bureaus Did Not Follow Department IT Investment Review and Governance Processes Before Contracting for Alternative Grants Management Systems

- **OIG's Recommendation #3:** Reviews the adequacy of the Department's system of internal control (policies, procedures, and governance bodies) for IT investments and makes changes to ensure operating units comply with policy and procedures and appropriate officials are held accountable for compliance.
- **OIG's Recommendation #4:** Reviews the adequacy of EDA's system of internal control of IT investments provided both through its memorandum of understanding with the Office of the Secretary for OCIO services and other applicable means (policies, procedures, and governance bodies).
- **OIG's Recommendation #5:** Conducts training on IT investment policy and procedures and QSMO requirements for appropriate personnel.

The Department agrees with the recommendations offered by OIG and offers the following comments:

- **OIG's Recommendation #3:** GEMS PMO will ensure GEMS complies with established OCIO Internal Controls process and procedures.
- **OIG's Recommendation #4:** GEMS PMO will conduct a Gap Analysis in FY25Q4 to review the adequacy of EDA's system of internal control of investment and scope of work to transition to eRA.
- **OIG's Recommendation #5:** GEMS PMO is analyzing training opportunities to establish a training plan on IT investment policies and procedures to establish appropriate training requirements for personnel.

Title of Finding III: The GEMS Project Should Improve Its Management of Requirements, Cost, and Schedule

- **OIG's Recommendation #6:** Assess the GEMS project's workforce needs and take appropriate steps as indicated.
- **OIG's Recommendation #7:** Ensure the project defines and implements management controls for requirements in accordance with GAO's Agile Assessment Guide.

- **OIG's Recommendation #8:** Ensure the project has support for cost estimation and better defines and implements its cost management controls in accordance with the Department's Cost Estimating Guide.
- **OIG's Recommendation #9:** Ensure the project defines and implements management controls for its schedule in accordance with the Department's administrative order on Acquisition Project Management (208-16) and GAO best practices. Implementing this recommendation and recommendations 7 and 8 will ensure that the \$27 million in estimated GEMS costs for FYs 2026 and 2027 is put to better use through more efficient and effective project execution.

The Department agrees with the recommendations offered by OIG and offers the following comments:

- **OIG's Recommendation #6:** To address OIG recommendations, DOC hired a dedicated federal GEMS Program Manager, GEMS PMO added a resource for EDA implementation, and a GEMS technical Subject Matter Expert (SME).
- **OIG's Recommendation #7:** GEMS PMO management will establish an internal control system to align with the federal internal control standards set forth by the Government Accountability Office (GAO), Standards for Internal Control in the Federal Government (Green Book).
- **OIG's Recommendation #8:** GEMS PMO is using the U.S. Department of Commerce Cost Estimating Guide to develop and review cost estimates and assessments as described in DAO 208-16.
- **OIG's Recommendation #9:** In December 2024, Department of Commerce leadership hired a dedicated GEMS PMO Program/Project Manager (Federal) staff member to manage cost, scope and requirements execution as defined by the Department's administrative order on Acquisition Project Management (208-16).

Title of Finding IV: NOAA's Transition to GEMS Provided Lessons for Future Transitions

- **OIG's Recommendation #10:** Ensure the Department collects lessons learned from NOAA's GEMS implementation and incorporates those lessons into plans and procedures for the NIST and EDA implementations.

The Department agrees with the recommendations offered by OIG and offers the following comments:

- **OIG's Recommendation #10:** The GEMS PMO has lessons learned data from the NOAA transition in FY24 this data will be leveraged for the NIST and EDA implementation. The DOC GEMS Lessons Learned document is in a shared location for GEMS and eRA use.

If you have any questions, please contact MaryAnn Mausser, DOC Audit Liaison, at (202)482-8120 or email mmausser@doc.gov.

REPORT

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