



March 2022

# VA FINANCIAL MANAGEMENT SYSTEM

## Additional Actions Needed to Help Ensure Success of Future Deployments

Accessible Version

# GAO Highlights

Highlights of [GAO-22-105059](#), a report to congressional requesters

## Why GAO Did This Study

VA's core financial management system is approximately 30 years old and is extremely difficult to maintain and adapt to emerging requirements and federal financial regulations. VA's FMBT program is replacing its legacy system with a new integrated system, iFAMS, at an estimated cost of \$3.24 billion. VA deployed the financial operations capabilities of iFAMS at NCA in November 2020 and at VBA in February 2021 and May 2021.

GAO was asked to review the progress of the FMBT program. The specific objectives for this report were to examine the extent to which (1) VA has measured if iFAMS is providing intended operational benefits; (2) VA's organizational change management activities facilitating its transition to the new financial management system were consistent with leading practices; and (3) VA's data migration activities to cleanse, convert, and migrate data to the new financial management system were consistent with leading practices. GAO compared key program management activities to leading practices and interviewed program officials, in addition to selected system users.

## What GAO Recommends

GAO is making six recommendations to VA, including that it establish target values for success metrics, ensure that organizational change management practices are consistent with leading practices, and mitigate the conversion timing risks and issues for future deployments. VA concurred with the recommendations and described actions the department will take to address them.

View [GAO-22-105059](#). For more information, contact Paula M. Rascona at (202) 512-9816 or [rasconap@gao.gov](mailto:rasconap@gao.gov) or Carol C. Harris at (202) 512-4456 or [harriscc@gao.gov](mailto:harriscc@gao.gov).

March 2022

## VA FINANCIAL MANAGEMENT SYSTEM

### Additional Actions Needed to Help Ensure Success of Future Deployments

## What GAO Found

The Department of Veterans Affairs (VA) Financial Management Business Transformation (FMBT) program has begun deploying the Integrated Financial and Acquisition Management System (iFAMS) at the National Cemetery Administration (NCA) and the Veterans Benefits Administration (VBA). According to leading practices, management should measure the performance of a system and related user satisfaction to monitor progress toward preestablished targets in order to understand and report on expected operational benefits. The program has developed metrics, established baselines, and begun to measure operational benefits for NCA and VBA. However, it has not identified target values for achievement. Therefore, reporting of results does not provide a complete and measurable picture of the program's progress relative to plans. Until the FMBT program is able to compare results to target values, the new system's delivery of intended operational benefits and the extent to which the department is maximizing the return on its multibillion-dollar investment are unclear.

Effective change management techniques make successfully implementing organizational change quickly and with reduced risk more likely. The FMBT program's organizational change management activities were consistent with four leading practices and partially consistent with the remaining three (see table). Consistently following effective change management practices for the transition to iFAMS helps ensure a smooth transition for future deployments.

#### FMBT Program Consistency with Organizational Change Management Leading Practices

Leading practice	GAO assessment
Developing a vision for change	Consistent
Identifying stakeholders	Consistent
Effectively communicating with stakeholders to manage commitment	Consistent
Identifying and addressing stakeholders' potential barriers to change	Consistent
Increasing workforce skills and competencies	Partially consistent
Assessing the readiness for change	Partially consistent
Assessing the results of change	Partially consistent

Source: GAO analysis of Department of Veterans Affairs' Financial Management Business Transformation (FMBT) program documentation. | [GAO-22-105059](#)

The FMBT program's data conversion activities were consistent with leading practices for the NCA and VBA deployments. But the conversion timing caused issues for some users, including impacts to productivity and lengthy work-arounds. The program's independent verification and validation team previously recommended that the program be aware of potential risks to a midyear conversion and proactively mitigate these risks for NCA. However, officials accepted the risks and said conversions during the year are necessary if VA is to implement iFAMS throughout the department in a reasonable amount of time. The program has planned some actions to address issues users faced, but its risk and issue register does not include or address the conversion timing risks, such as user issues or those associated with the number and types of transactions and balances converted. Mitigating conversion timing risks and

issues is especially important for future deployments, some of which are scheduled even later in the year and will impact more users.

---

# Contents

---

GAO Highlights	ii
<b>Why GAO Did This Study</b>	ii
<b>What GAO Recommends</b>	ii
<b>What GAO Found</b>	ii
Letter	1
Background	3
FMBT Program Has Begun to Report on Operational Benefits but Has Not Established Related Targets	6
FMBT Program’s Organizational Change Management Activities Were Partially Consistent with Leading Practices	18
FMBT Program’s Data Migration Activities Were Consistent with Leading Practices, but the Timing Negatively Impacted Some Users	24
Conclusions	34
Recommendations for Executive Action	35
Agency Comments	36
Appendix I: Objectives, Scope, and Methodology	39
Appendix II: Requirements Validation Process and Results for the Integrated Financial and Acquisition Management System	44
Appendix III: User Feedback on VA’s New Financial Management System from Structured Interviews	53
Appendix IV: Comments from the Department of Veterans Affairs	66
Accessible Text for Appendix IV: Comments from the Department of Veterans Affairs	71
Appendix V: GAO Contacts and Staff Acknowledgments	74
Tables	
Table 1: Results of Customer Experience Metrics for Implementation of the Integrated Financial and Acquisition Management System at National Cemetery Administration	12
Table 2: Financial Management Business Transformation (FMBT) Program Consistency with Organizational Change Management Leading Practices	19
Table 3: Evaluation of Financial Management Business Transformation (FMBT) Program Data Migration Process	

---

against Applicable Joint Financial Management and Improvement Program Leading Practices	26
Table 4: Evaluation of Data Migration Process against Selected Modernization and Migration Management Leading Practices	28
Table 5: Data Converted into the Integrated Financial and Acquisition Management System (iFAMS) for National Cemetery Administration and Veterans Benefits Administration General Operating Expenses	31
Table 6: Business Process Reengineering Gaps by Value Stream	47
Table 7: Number of National Cemetery Administration (NCA) Functional Requirements	50
Table 8: Number of Veterans Benefits Administration (VBA) General Operating Expenses (GOE) Functional Requirements	51
Table 9: Financial Management Business Transformation (FMBT) Enterprise Acquisition Requirements from Previous System Implementations	52

---

Figure

Figure 1: Wave-Specific Configuration Process	48
---	----

---

---

### **Abbreviations**

BPR	business process reengineering
CAATS	Centralized Administrative Accounting Transaction System
CFO	Chief Financial Officer
FMBT	Financial Management Business Transformation
FMS	Financial Management System
GOE	General Operating Expenses
GSA	General Services Administration
IT	information technology
iFAMS	Integrated Financial and Acquisition Management System
JFMIP	Joint Financial Management Improvement Program
M3	Modernization and Migration Management
NCA	National Cemetery Administration
OIG	Office of Inspector General
OMB	Office of Management and Budget
SEI	Software Engineering Institute
SME	subject matter expert
USDA	U.S. Department of Agriculture
VA	Department of Veterans Affairs
VBA	Veterans Benefits Administration

This is a work of the U.S. government and is not subject to copyright protection in the United States. The published product may be reproduced and distributed in its entirety without further permission from GAO. However, because this work may contain copyrighted images or other material, permission from the copyright holder may be necessary if you wish to reproduce this material separately.



March 24, 2022

Congressional Requesters

The Department of Veterans Affairs' (VA) core financial management system is approximately 30 years old and, according to the department, is extremely difficult to maintain and adapt to emerging requirements and federal financial regulations. To replace its aging financial and acquisition systems with one integrated system, the Integrated Financial and Acquisition Management System (iFAMS), VA established the Financial Management Business Transformation (FMBT) program in 2016. The FMBT program is intended to provide a comprehensive financial management solution that enables VA to meet financial management goals and objectives and to comply with financial management legislation and directives.

The FMBT program is working to deploy the financial and acquisition capabilities of iFAMS throughout the department and currently plans to deploy these capabilities in a series of 21 deployments through 2028. iFAMS is estimated to cost \$3.24 billion as of September 2021.<sup>1</sup> VA deployed two initial implementation waves: one for the National Cemetery Administration (NCA) in November 2020 and one for the Veterans Benefits Administration (VBA) General Operating Expenses (GOE) in February 2021 (phase 1) and May 2021 (phase 2).

This is VA's third attempt to replace its aging systems—the first two attempts failed after years of development and hundreds of millions of dollars in cost. Recognizing these and other information technology (IT)-related challenges across the government, we designated Management of IT Acquisitions and Operations as a high-risk area in 2015.<sup>2</sup> In addition,

---

<sup>1</sup>This 10-year life cycle cost estimate includes costs from fiscal years 2016 to 2020, projected costs from fiscal year 2021, and estimated costs for fiscal years 2022 to 2031.

<sup>2</sup>GAO, *High-Risk Series: An Update*, [GAO-15-290](#) (Washington, D.C.: Feb. 11, 2015); *High-Risk Series: Substantial Efforts Needed to Achieve Greater Progress on High-Risk Areas*, [GAO-19-157SP](#) (Washington, D.C.: Mar. 6, 2019); and *High-Risk Series: Dedicated Leadership Needed to Address Limited Progress in Most High-Risk Areas*, [GAO-21-119SP](#) (Washington, D.C.: Mar. 2, 2021).

we designated VA acquisitions as a high-risk area in 2019 in part because of a lack of reliable data systems.

You asked us to review the progress of the FMBT program. In March 2021, we issued a report on VA's efforts to address challenges it identified with implementing iFAMS and the extent to which the department had followed certain IT management best practices.<sup>3</sup> This second report examines the extent to which (1) VA has measured if iFAMS is providing intended operational benefits; (2) VA's organizational change management activities facilitating its transition to the new financial management system for NCA and VBA-GOE were consistent with leading practices; and (3) VA's data migration activities to cleanse, convert, and migrate NCA and VBA-GOE data to the new financial management system were consistent with leading practices.

To determine the extent to which VA has measured whether iFAMS is providing intended operational benefits, we examined the FMBT program's plans for measuring and reporting on performance and identifying metrics, baseline measures, and targets and compared the approach to leading practices and federal guidance. We also examined the actual results reported for NCA and VBA-GOE, reviewed the extent to which metrics were being met, and determined what VA did to take corrective actions as appropriate. We also conducted structured interviews with 28 selected users or user representatives of the NCA wave and VBA-GOE wave to obtain their feedback on the new system.

To determine the extent to which VA organizational change management activities facilitating its transition to the new financial management system for NCA and VBA-GOE were consistent with leading practices, we examined program plans for organizational change management and discussed the program's approach with cognizant FMBT program officials at NCA and VBA-GOE. We reviewed wave-specific documentation, such as stakeholder analysis, slides from site visits, change champion network meeting minutes, and organizational change readiness assessment reports to assess whether the program's activities aligned with its planned approach and leading practices.

To determine the extent to which VA's data migration activities to cleanse, convert, and migrate NCA and VBA-GOE data to the new financial

---

<sup>3</sup>GAO, *Veterans Affairs: Ongoing Financial Management System Modernization Program Would Benefit from Improved Cost and Schedule Estimating*, [GAO-21-227](#) (Washington, D.C.: Mar. 24, 2021).

management system were consistent with leading practices, we examined the FMBT program's data migration process for NCA and VBA-GOE; reviewed data migration documentation, such as data cleansing and data conversion plans; and compared results of our review to leading practices. Appendix I provides additional details on our objectives, scope, and methodology.

We conducted this performance audit from March 2021 to March 2022 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

---

## Background

Since fiscal year 2015, financial statement auditors have reported material weaknesses related to VA's financial systems and reporting.<sup>4</sup> The FMBT program is in the process of migrating VA to a cloud-based version of the Momentum software-as-a-service solution configured for the department, referred to as iFAMS.<sup>5</sup> VA awarded a systems integration contract to CGI Federal to support the FMBT program through incremental deployments, referred to as waves, which is to deliver financial management and acquisition capabilities and related reporting functionality to specific administrations and staff offices.

From March 2017 through September 2018, the department completed a series of business process reengineering (BPR) workshops to standardize business processes and identify gaps between VA's business processes and Momentum. In November 2018, VA finalized its iFAMS enterprise configuration—which, according to program documentation, was intended to standardize at least 70 percent of the system

---

<sup>4</sup>A material weakness is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected, on a timely basis.

<sup>5</sup>Software-as-a-service is a cloud service model where the service provider delivers one or more applications and all the resources (operating system and programming tools) and underlying infrastructure, which the agency can use on demand.

architecture, business processes, interfaces, and data for use throughout the department using the Momentum application.

During each implementation wave, the department intends to identify additional functional requirements, business processes, workflows, and data uniquely required by each VA administration and staff office beyond the enterprise configuration. Additional work will focus on, among other things, configuring and testing iFAMS to address these additional requirements prior to each wave's deployment. For more information on how VA validated requirements for the enterprise and wave-specific configurations, see appendix II.

---

## Deployment of iFAMS

In November 2020, the FMBT program deployed the first iFAMS financial management capabilities at NCA, followed by VBA-GOE deployment in February 2021 (phase 1) and May 2021 (phase 2). Immediately following the deployments (also referred to as go-live), the waves entered a period known as Hypercare, which supported the iFAMS transition in the 90 days following each deployment. Hypercare provided elevated levels of support while end users increased their familiarity with the new system and worked to accelerate system stabilization.

Starting in Hypercare, which is to continue to be used in subsequent iFAMS waves, the FMBT program monitors progress by tracking a number of indicators on system performance and user engagement. For example, during Hypercare, measures related to system status (e.g., availability and transaction processing volume) and results related to service calls are tracked and reported on a program dashboard. In addition, service desk and virtual support teams hold regular meetings to enable quick prioritization of issues identified through customer support reports. Significant issues identified and analyzed during this time may result in, for example, configuration changes to the software or revised access privileges.

Once the system is determined to be stable, iFAMS is to transition to operations and maintenance support, and the FMBT program conducts an organizational change assessment (standardized surveys of 10-12 questions). This assessment provides insight on how system users assess their own capabilities and comfort with iFAMS. In addition to monitoring the original measures, FMBT begins to monitor and report on

---

operational performance metrics that eventually will inform overarching strategic goals at VA.

---

## Prior Reviews of VA's Financial Management System Modernization Effort

We and VA's Office of Inspector General (OIG) have reported on VA's implementation of its integrated financial and acquisitions system. In March 2021, we reported on progress of the FMBT system modernization program.<sup>6</sup> We described steps VA had taken to address challenges it had identified and evaluated the extent to which VA had followed certain IT management best practices. We found that the department had not fully met certain best practices for developing and managing cost and schedule estimates. As a result, its estimates were not reliable. We made two recommendations to VA to ensure that the program's cost and schedule estimates are consistent with GAO-identified best practices. Following our report, VA stated that it had plans to address our recommendations. Specifically, the department intended to obtain an independent cost estimate and update its life cycle cost estimate. VA also planned to increase metrics tracking for schedule analysis to improve its ability to monitor the program schedule. We continue to monitor VA's actions to address our recommendations.

Further, in September 2021, VA's OIG issued a management advisory memorandum, reporting that iFAMS users were experiencing challenges with reporting capabilities that were needed to support decision-making.<sup>7</sup> The OIG found that reporting limitations made it difficult for users to monitor budget and operations for NCA. Accordingly, the OIG requested that the program address inadequate reporting capabilities in iFAMS. The FMBT program cited various actions it had taken to address the reporting challenges, such as implementing fixes and enhancements to users' highest-priority report and providing training on the system's reporting capabilities. The OIG noted that it would continue to monitor the program's efforts to ensure that users' needs are met as iFAMS deployment continues.

---

<sup>6</sup>[GAO-21-227](#).

<sup>7</sup>Department of Veterans Affairs, Office of Inspector General, *Inadequate Business Intelligence Reporting Capabilities in the Integrated Financial and Acquisition Management System*, Management Advisory Memorandum #21-02609-229 (Sept. 8, 2021).

---

## FMBT Program Has Begun to Report on Operational Benefits but Has Not Established Related Targets

Measuring the performance of a system and user satisfaction with the system is essential for monitoring progress toward preestablished goals or targets and allows programs such as the FMBT program to understand and report whether expected operational benefits have been delivered as intended and needs have been met for users and management.<sup>8</sup>

According to leading practices and federal guidance, management should ensure that the processes for measuring operational performance are established and used consistently to evaluate results and benefits realized.<sup>9</sup> These processes should

- document an approach to identifying metrics including establishing metrics, baseline measures, and target values related to the operational performance of the system;<sup>10</sup>
- monitor performance and report results; and
- take appropriate corrective actions.

---

<sup>8</sup>Operational benefits are the benefits expected to be realized after implementation of an acquired system as compared to its intended purpose.

<sup>9</sup>See GAO, *Information Technology Investment Management: A Framework for Assessing and Improving Process Maturity*, [GAO-04-394G](#) (Washington, D.C.: Mar. 2004); GAO, *Managing for Results: Enhancing Agency Use of Performance Information for Management Decision Making*, [GAO-05-927](#) (Washington, D.C.: Sept. 9, 2005); GAO, *Agile Assessment Guide: Best Practices for Agile Adoption and Implementation*, [GAO-20-590G](#) (Washington, D.C.: Sept. 2020); Office of Management and Budget (OMB), *Managing Information as a Strategic Resource*, OMB Circular No. A-130 (July 2016); Office of Management and Budget, *Preparation, Submission, and Execution of the Budget*, OMB Circular No. A-11 (Dec. 2020); General Services Administration, *Modernization and Migration Management (M3) Playbook*, accessed Feb. 2, 2021, <https://www.ussm.gov/m3>; and Software Engineering Institute, *CMMI® for Acquisition, Version 1.3* (Nov. 2010). Our prior work also emphasizes attributes of performance measures: see GAO, *Defense Health Care Reform: Additional Implementation Details Would Increase Transparency of DOD's Plans and Enhance Accountability*, [GAO-14-49](#) (Washington, D.C.: Nov. 6, 2013), and *Electronic Health Records: Outcome-Oriented Metrics and Goals Needed to Gauge DOD's and VA's Progress in Achieving Interoperability*, [GAO-15-530](#) (Washington, D.C.: Aug. 13, 2015).

<sup>10</sup>Baseline measures are those that provide a basis for comparison for performance in an operational system environment. Targets should be specific and measurable in order to demonstrate and report the degree to which desired results are achieved.

Operational performance metrics may seek to measure results related to system performance as well as financial performance, strategic and business results, and user/customer experience.

---

### FMBT Program Established Metrics and Baselines but Not Target Values

The FMBT program developed metrics and established baselines for NCA and VBA but did not identify target values for these metrics. Specifically, the program defined metrics during the planning stages for each iFAMS implementation wave through deep dive sessions with stakeholders. According to FMBT documentation, the metrics were selected to foster agreement among program leaders and the customers (e.g., NCA and VBA) about expectations for performance of the new system and measure the benefits to be delivered once iFAMS was operational. The measures from individual waves were also intended to help ensure that the program is making progress toward its planned strategic outcomes.

According to the FMBT strategic planning documents, the planned strategic outcomes for the program include:

1. Enhanced service for those who serve veterans: Provide those who serve veterans with faster and higher-quality services.
2. Timely and accessible financial and acquisition information: Improve the accuracy and availability of data.
3. Compliance and security improvements: Deploy a cloud-based system with solutions to current finance and acquisitions compliance challenges.
4. Integrated financial management and acquisition functions.

According to program officials, they focused on metrics that would allow them to demonstrate outcomes desired by NCA or VBA that could also identify a baseline measure from the old systems (e.g., Financial Management System (FMS) or Centralized Administrative Accounting Transaction System (CAATS)). These included operational metrics—those related to system transactions and performance, such as the number of errors in payroll processing—and customer experience metrics—those related to user adoption and opinion, such as whether the system meets a user’s daily operational needs. Operational metrics were to be monitored and reported monthly after the close of the Hypercare period for each wave. Customer experience metrics were to be measured

quarterly for the first 2 years after implementation depending on the schedule established with each administration.

The program established the baseline measure for each metric by determining where data would come from, how often the data would be measured, and who was responsible. Ultimately, NCA and VBA captured specific measures from the legacy environment that served as a baseline for comparison.<sup>11</sup> For example, the program, in conjunction with NCA, established the average number of payroll processing errors per pay period in the legacy environment as a baseline measure.

Further, the program also established a baseline to compare customer experience with iFAMS to experience with the old systems. To set the baseline for NCA, a survey was administered to users from March through August 2020. The percentage of positive responses to each question about the legacy system was averaged to become the baseline. In addition, a similar survey was administered to VBA-GOE users in January 2021.

However, after reviewing the initial NCA customer experience results, FMBT officials acknowledged that they had concerns about comparing users' experience with iFAMS to baseline measures from the legacy environment. Specifically, they were concerned that iFAMS is a significantly more complex financial system than the previous system. As a result, users' sentiment may have disproportionately reflected the challenges of using a new, more complex system.

Accordingly, program officials have revised the approach to establishing the customer experience baseline consistent with the program's Agile approach to project management.<sup>12</sup> Specifically, the program plans to use the results from a similar question from the final organizational change assessment from each wave to serve as a baseline measure for operational needs. The four remaining customer experience metrics that measure ease of use, managing funds, business intelligence, and period

---

<sup>11</sup>One NCA metric related to the percentage of transactions that are obligated with valid commitments had no baseline value because it was intended to measure new capabilities not available in the legacy environment. Both the FMBT program and NCA agreed to include this metric.

<sup>12</sup>Agile project management describes an iterative process for managing software projects that focuses on continuous releases and incorporating customer feedback with each iteration. The FMBT program life cycle adheres to an Agile project management methodology capable of delivering frequent releases.

close are to use the results of the first customer experience survey, which is to be administered within 90 days after the close of Hypercare, as the new baseline measures. This would allow the program to compare customer experience with iFAMS at the end of Hypercare to the user experience in the future, which program officials believe is a better baseline measure of user adoption of the new system. NCA began administering its next customer experience survey in early 2022.

The program also plans to employ the new baseline approach and measures for the VBA-GOE wave once it begins to measure the customer experience metrics expected in early 2022. Specifically, the results from one question from the organizational change assessment will establish the baseline for operational needs. The first customer experience survey, which is expected in early 2022, will establish the baseline for the performance monitoring.

While the FMBT program had established an approach to metrics and baselines, the program did not identify target values for NCA or VBA that would allow it to measurably demonstrate and report the extent to which intended benefits are being delivered. Instead, FMBT program officials stated that the targets for all metrics were intended to focus on general improvement over the baseline measures from the legacy environment. According to the officials, they had not worked to define specific targets for wave metrics. Officials determined that generally understanding the metric performance as improving or not would allow them to see if performance was moving in the wrong direction. However, they also noted that in the future, the program might work to define more specific targets.

Until the program identifies specific targets for performance, it will be limited to comparing metric results to the baseline. As such, the program may not be positioned to report that measurable progress has been made over time to fully meet the needs of the department and maximize the return on its multibillion-dollar investment.

---

### FMBT Program Is Monitoring Operational Performance, but Reporting Is Limited

While the program has monitored and partially reported on a number of metrics compared to baseline measures, the lack of target values has limited the program's ability to report on results. Specifically:

- The FMBT program monitored all operational metrics for NCA since February 2021 and reported that it is generally improving upon baseline measures.
- The NCA customer experience measures were below the original baseline established.
- Early reporting of VBA-GOE operational metrics results are mixed, with one metric meeting and two falling short of the baseline measures.
- A survey to measure customer experience metrics for VBA-GOE has been delayed to ensure that a simplified iFAMS configuration is in place before reporting metrics, and the program plans to measure additional results beginning in early 2022.

### NCA Operational Metrics

According to program officials, NCA identified four operational metrics and related baseline measures intended to quantitatively measure financial or operational improvements.<sup>13</sup> For the NCA wave, operational metrics were

- the percentage of manually corrected transactions,
- the total dollar volume of nonpay delinquent undelivered orders as a percentage of total dollar volume of year-to-date nonpay obligations,
- the number of errors in payroll processing per pay period, and
- the percentage of transactions that are obligated with valid commitments.

The program began monitoring and reporting as planned for the NCA wave operational metrics using a program dashboard beginning in February 2021. Since that time, two metrics—(1) the percentage of manually corrected transactions and (2) the total dollar volume of nonpay delinquent undelivered orders as a percentage of total dollar volume of year-to-day nonpay obligations—have consistently measured better than

---

<sup>13</sup>Baseline measures were measured in the legacy system environment to provide a basis for comparison with the new iFAMS environment.

---

baseline measures, which indicates that iFAMS is delivering operational benefits in these areas.<sup>14</sup>

A third metric—the number of errors in payroll processing—initially met the baseline measure, but errors began to increase. Program officials noted that they took corrective actions based on these results. Specifically, FMBT program officials said that configuration changes made to iFAMS caused certain payroll transactions to be rejected. Additional configuration changes and levels of approval were implemented to resolve the issues. By December 2021, the program documented improved results in the most recent pay periods, and the metric is currently meeting its baseline measure.

The fourth metric—the percentage of transactions that are obligated with valid commitments—was intended to measure new capabilities that iFAMS delivered that were not previously included in the legacy environment. However, the program has determined that this system metric is no longer required. Specifically, to ensure that general ledger accounts were updating funds correctly in iFAMS, a configuration change was made to prevent incorrect postings for expired appropriations.<sup>15</sup> According to program officials, this change was consistent with federal requirements and makes the metric unnecessary in the future.

### NCA Customer Experience Metrics

The FMBT program identified five metrics for measuring the quality of customer experiences with iFAMS:

- *Ease of use:* How easy is the current financial system to use?

---

<sup>14</sup>The metric for the percentage of manually corrected transactions is a measure of the average ratio of the total number of NCA-specific journal voucher entries per month to the total number of NCA obligations per month. The baseline measure from the legacy system environment was 2.98 percent. The metric related to undelivered orders is a ratio of the dollar volume of nonpay delinquent undelivered orders as a percentage of dollar volume of year-to-date nonpay obligations. The baseline measure from the legacy system environment was 12.98 percent. Measuring better than the baseline for both of these metrics means the measure from iFAMS is lower than the baseline.

<sup>15</sup>A general ledger is a chart of accounts established to support the consistent recording of financial events as well as the preparation of standard external reports required by the Office of Management and Budget and the Department of the Treasury.

- *Operational needs:* The current financial system meets my daily operational needs.
- *Managing funds:* I am able to manage allocated funds efficiently within the current financial system.
- *Business intelligence:* How would you rate your experience with financial reporting capabilities in the current system?
- *Period close:* How satisfied are you with period end close processes in the current system?

In August 2021, the FMBT program completed a survey to measure the customer experience metrics for NCA users and results for each metric were below the original baseline measures.<sup>16</sup> These results indicated that operational benefits were not yet being delivered. This was the first formal measurement taken since the November 2020 go-live and was initially delayed by 3 to 6 months to avoid over-surveying of NCA users. Table 1 shows the results related to the five metrics regarding iFAMS customer experience compared to original baseline measures.

**Table 1: Results of Customer Experience Metrics for Implementation of the Integrated Financial and Acquisition Management System at National Cemetery Administration**

Metric	August 2020 baseline measure	August 2021 survey results
<i>Ease of use:</i> How easy is the current financial system to use?	70% Very easy or Easy	14% Very easy or Easy
<i>Operational needs:</i> The current financial system meets my daily operational needs.	74% Strongly agree or Agree	30% Strongly agree or Agree
<i>Managing funds:</i> I am able to manage allocated funds efficiently within the current financial system.	61% Strongly agree or Agree	25% Strongly agree or Agree
<i>Business intelligence:</i> How would you rate your experience with financial reporting capabilities in the current system?	45% Very satisfied or Satisfied	16% Very satisfied or Satisfied
<i>Period close:</i> How satisfied are you with period end close processes in the current system?	48% Very satisfied or Satisfied	No measure taken as of August 2021 <sup>a</sup>

Source: GAO analysis of metrics reported by the Financial Management Business Transformation program. | GAO-22-105059

<sup>a</sup>The period close metric will not be measured until January 2022 to allow National Cemetery Administration results to include feedback from fiscal year-end closeout activities.

Similar to the results of the initial customer experience metrics reported for NCA, our discussions with 14 NCA users indicated that they were generally not satisfied with iFAMS (see app. III for the results of NCA

<sup>16</sup>One measure related to period close activities will not be measured until January 2022 to allow this metric to include feedback from fiscal year-end closeout activities.

customer feedback from our structured interviews). For example, of the 14 NCA users we interviewed:

- Two agreed or strongly agreed with the statement that overall they were satisfied with the new system, and one agreed that the new system met their expectations from prior to go-live.
- Three agreed or strongly agreed that the new system allowed them to effectively perform their duties. One said the information in the new system was presented in a logical manner. In addition, one user said the system greatly improved the effectiveness of financial processing and reporting.
- None of the users felt they had been provided effective training on how to use the system.
- About half of the 14 users encountered challenges with the completeness and accuracy of available reports or said that reports were inaccurate or difficult to reconcile.

Further, regarding the new reporting capabilities and how they affected management needs, NCA's Chief Financial Officer (CFO) cited concerns with iFAMS and business intelligence reporting tools in NCA's fiscal year 2021 first and third quarter financial statement certifications. In June 2021, the Acting Under Secretary for Memorial Affairs also sent a memorandum to VA's Assistant Secretary for Management and CFO expressing concern about several significant system issues, including business intelligence reporting, that were adversely impacting the effectiveness of the employees who support NCA's mission.<sup>17</sup>

### VBA-GOE Operational Metrics

According to program officials, VBA identified operational metrics and related baseline measures intended to quantitatively measure financial or operational improvements achieved from iFAMS. Operational metrics were

- the number and total dollar amount of interest penalties assessed to VBA-GOE because of late payments, as well as interest penalties as a percentage of total disbursements;

---

<sup>17</sup>These issues were consistent with September 2021 findings issued by VA OIG in a management advisory memo.

- the number of manually corrected obligations (i.e., Journal Voucher entries) as a percentage of total transactions per month for VBA-GOE; and
- the average number of VBA-GOE stations with out-of-balance designations.

The program began monitoring and reporting on the VBA-GOE wave operational metrics in August 2021 after the close of Hypercare. One metric, consisting of measures of the number and dollar amount of interest penalties assessed to VBA because of late payment as a percentage of total disbursements, exceeded baseline measures for August and September 2021.

Two other metrics—related to the number of manually corrected obligations as a percentage of total monthly transactions and the average number of VBA-GOE stations with out-of-balance designations—have not met performance baselines. Specifically, both measures reported were higher than the baseline measure established, but were intended to decrease from the baseline. The program plans to continue to monitor these metrics, but no corrective actions are planned as of January 2022.

The program reported that the results of the VBA-GOE operational metrics were mixed and FMBT officials said they expect to see fluctuations in measures depending on how and when users process transactions in the system. According to FMBT officials, these fluctuations do not always indicate a problem. Further, they said that while the program would take corrective actions if system operations affected the metrics, it is too soon to determine if the trend will continue. The program intends to continue to provide the results to VBA to allow them to make corrections for user issues as necessary.

### VBA-GOE Customer Experience Metrics

The program planned to use the same customer experience metrics identified during the NCA wave to measure the quality of customer experiences with iFAMS users across waves. Although the customer experience survey was planned for after the close of Hypercare, VBA delayed the survey for 3 to 6 months. VBA officials felt the delay would provide a better reflection of users' experience with iFAMS given that there is a new configuration and this is a major change to the system. The program expects to start administering the survey in early 2022.

Nevertheless, the program has gathered information about user satisfaction and ability through informal feedback, input from the program advisor and change champion network, and the final organizational change assessments administered after each phase of the VBA-GOE implementation. According to FMBT officials, the information indicates that lessons learned from the NCA implementation may have improved satisfaction for VBA users. However, these indicators are not metrics that can be compared to baseline measures or specific targets.

Our discussions with 14 VBA users also showed improved satisfaction compared to the NCA users we interviewed (see app. III for the results of VBA customer feedback from our structured interviews). For example, of the 14 VBA users we interviewed:

- Ten agreed or strongly agreed with the statement that overall they were satisfied with the new system. Ten also agreed or strongly agreed that the new system met their expectations from prior to go-live.
- Nine said it took the same or more time to perform their job tasks in iFAMS compared to the old system, and the majority agreed or strongly agreed that the new system allowed them to effectively perform the duties of their position.
- Twelve agreed or strongly agreed that they had been provided effective training on how to use the system, and 11 reported that they received adequate resolution to problems encountered with the new system.
- Ten agreed that reports from the system were mostly or completely accurate.
- Eleven considered the reports from the new system average, good, or excellent, while three users had no basis to judge the quality of reports.

As a result of delaying the first customer experience survey, the FMBT program is not yet able to measure and report on the VBA-GOE customer experience metrics and does not plan to measure and set the baseline until early 2022.

Collectively, the reporting of results for NCA and VBA-GOE is limited to providing an indication of which way performance is trending, but does not offer a robust picture of where progress stands against where the program planned to be. There is also no context to ascertain the pace at which progressive improvements are expected—if at all—in the future.

---

Until the program reports operational benefits in relation to target values for each of the metrics, it will not be able to report the extent to which operational benefits have been delivered.

---

### FMBT Program Planned Corrective Actions to Address Issues

In addition to operational performance metrics that the FMBT program tracked and reported, the program monitored other indicators and measures throughout Hypercare and collected user comments from final organizational change assessments that provided insight into the day-to-day operation and acceptance of the system. These measures included, for example, system availability, the number of transactions processed, the number and type (including severity) of service calls registered, and the number of service calls resolved over time and the level of assistance required.

The program used these early indicators and measures of system performance to report status toward system stability; help identify root causes and prioritize issues to be addressed by, for example, configuration or technical changes; identify additional assistance or training needed; and address security and access issues that arose in the live system environment. For these measures, the program did not identify baselines or specific targets for comparison purposes; these measures were not used to measure operational benefits.

However, the FMBT program relied on a number of these measures and feedback from users when the new system went live for the NCA and VBA-GOE waves. For example, program officials concluded that by comparing initial results from customer experience metrics to early indicators, such as questions on the fourth organizational change assessment related to operational needs, they have seen customer experience results improve since go-live. Specifically, reports indicate about an 18 percent improvement in the positive response rate since February 2021 when the original measures indicate a decrease in satisfaction from users.

As a result of monitoring these early indicators, the FMBT program identified areas of concern and has taken actions or described actions planned to address issues, which are intended to improve operational benefits achieved going forward. Specifically:

- **Operational improvements.** To address user concerns about the complexity of iFAMS and challenges with entering transactions, the program planned and configured a simplified user interface, referred to as iFAMS EZ, which is intended to reduce the complexity of entering purchase card transactions and increase ease of use. This configuration change was tested and then released to NCA and VBA in early November 2021.
- **Improved work aids and training.** To address user concerns and desire for additional training and guidance, the program has provided additional training, guides, and work aids to help address user challenges with navigating iFAMS for specific tasks and the new financial processes. The program also coordinated daily and weekly calls for users to discuss issues with subject matter experts.
- **Reporting enhancements.** Additional feedback from users indicated challenges with reporting. As a result, the FMBT program developed additional business intelligence reports to improve users' experience with financial reporting. According to program officials and the NCA CFO, the biggest changes to the reports area included a report that provided NCA with additional capabilities to manage its funds at all levels. The program is working to begin a pilot of CFO Control Tower, a business intelligence reporting solution that cBEYONData developed and that the Department of Justice uses, which delivers prebuilt reports and is intended to improve ad hoc reporting capability.
- **Security enhancements.** The program also addressed issues with users with different security rights who were pulling the same reports and getting different numbers based on their individual access. This issue was addressed by providing static reports and making changes to the implementation of the security model within the reporting tool.

These corrective actions that the FMBT program took have positively affected NCA and VBA. For example, the NCA CFO said that NCA now has the reporting capabilities from iFAMS and the business intelligence reporting tool to know what the budget execution levels are, which provides the information that decision makers need to make budgetary decisions. In addition, the Director of VBA Financial Management Business Solutions acknowledged that although the reports were not yet meeting VBA's financial and reporting needs, a lot of work had been done to change and add reports.

Since the program has recently made changes to the system and to the measurement baselines for the customer experience metrics, it has not had time to measure and understand the full impact of these changes on operational benefits. If the program continues to monitor and report on the

---

operational benefits as planned, it will be better positioned to implement the system as intended for future deployments.

---

## FMBT Program's Organizational Change Management Activities Were Partially Consistent with Leading Practices

According to federal guidance and other leading practices, change management practices are intended to apply an organized and structured framework to the often chaotic and perplexing world of organizational change.<sup>18</sup> Effective change management techniques help managers to plan, organize, and negotiate successful changes in the organization. The objective of managing organizational change is to maximize the likelihood of successfully implementing organizational change quickly and with reduced risk. Leading practices for change management activities include the following:

- **Developing a vision for change.** The vision for change effectively identifies the compelling need for change and benefits of the desired change that can motivate stakeholders to accept and willingly participate to make the change successful.
- **Identifying stakeholders.** Stakeholders are those individuals, groups, departments, and organizations that have a direct interest in the change effort and will be directly affected by the change effort, have influence over it, or both. Given their power to sustain or derail a change initiative, efforts should be made to identify and understand stakeholders and their concerns.
- **Effectively communicating with stakeholders to manage commitment.** Communication of the what, when, why, and how of the change must be frequent, targeted, and compelling and should

---

<sup>18</sup>Project Management Institute, Inc., *Managing Change in Organizations: A Practice Guide* (Newtown Square, Pa.: 2013); Office of Personnel Management, *Migration Planning Guidance Information Practices Documents, Change Management Best Practices* (Oct. 7, 2011); GAO, *Business Process Reengineering Assessment Guide*, version 3, [GAO/AIMD-10.1.15](#) (Washington, D.C.: May 1997); ISACA, *COBIT 2019 Framework* (2019); and Prosci, *The Prosci ADKAR® Model, A Goal Oriented Change Management Model to Guide Individual and Organizational Change*, accessed Feb. 21, 2021, <https://www.prosci.com/methodology/adkar>. ADKAR® is a registered trademark of Prosci, Inc.

demonstrate management commitment and understanding of the change investment from stakeholders.

- **Identifying and addressing stakeholders’ potential barriers to change.** Steps should be taken to identify and understand potential resistance barriers or roadblocks throughout the change efforts. Actions should be taken to address barriers that might derail change efforts when they arise.
- **Increasing workforce skills and competencies.** Empower stakeholders with the knowledge of how to successfully change and gain the full benefits from the change by training them in the new processes, skills, and competencies needed throughout the transition.
- **Assessing the readiness for change.** Periodic checkpoints, analysis, and metrics should be used to measure the state of readiness. Any potential problems should be resolved in a timely fashion.
- **Assessing the results of change.** Once change has been implemented, it is important to measure adoption and obtain feedback from stakeholders to help determine how successful the change was and actions needed to ensure that the change is reinforced and sustained.

The FMBT program’s organizational change management activities were consistent with four leading practices and partially consistent with the remaining three. The extent to which the program’s organizational change management activities were consistent with leading practices is summarized in table 2.

**Table 2: Financial Management Business Transformation (FMBT) Program Consistency with Organizational Change Management Leading Practices**

Leading practice	GAO assessment
Developing a vision for change	Consistent
Identifying stakeholders	Consistent
Effectively communicating with stakeholders to manage commitment	Consistent
Identifying and addressing stakeholders’ potential barriers to change	Consistent
Increasing workforce skills and competencies	Partially consistent
Assessing the readiness for change	Partially consistent
Assessing the results of change	Partially consistent

Legend: Consistent – VA provided evidence that it conducted organizational change management activities mostly consistent with leading practices. Partially consistent – VA provided evidence that it conducted organizational change management activities consistent with some of the leading practice criteria, but some key parts were not followed. Not consistent – VA did not provide sufficient evidence that it followed leading practices.

Source: GAO analysis of Department of Veterans Affairs’ (VA) FMBT program documentation. | GAO-22-105059

As shown in the table, the following activities were consistent with leading practices.

- **Developing a vision for change.** The FMBT program’s vision stated the business reasons for transitioning to iFAMS, which included meeting VA’s goals and objectives and complying with financial management legislation and directives. Program documentation for change management also described the intended benefits for the change to iFAMS, including increased transparency, accuracy, timeliness, and reliability of financial information to result in improved fiscal accountability to taxpayers and improved care and services to veterans.
- **Identifying stakeholders.** The FMBT program’s organizational change management plans included steps for conducting stakeholder analysis. In addition, the program identified stakeholders for the NCA wave and VBA-GOE wave. For example, the program identified that stakeholders included around 770 users from NCA and 1,016 users from VBA-GOE. The program’s analysis identified the impact of the new system on users and potential changes to their day-to-day functions.
- **Effectively communicating with stakeholders to manage commitment.** FMBT organizational change management plans included activities to inform and engage stakeholders and share critical information on the program’s upcoming activities, benefits, and anticipated impacts of iFAMS. In addition, the FMBT program’s communication tracker documented about 160 completed or ongoing communications to NCA audiences and about 200 completed or ongoing communications to VBA audiences. The program also established a change champion network of employees who could influence their peers to help the change to “stick.” Further, it held 13 monthly change champion network meetings for the NCA wave and 17 monthly change champion network meetings for the VBA wave.
- **Identifying and addressing stakeholders’ potential barriers to change.** The FMBT program’s organizational change management plans described potential barriers to change and the use of the change champion network to identify potential barriers and resistance mitigation strategies. The program also conducted site visits and organizational change assessments to gather feedback from stakeholders that VA identified and proposed actions or recommendations to address them. For example, the organizational change assessment for NCA in February 2021 noted three themes: policy and process, user experience, and FMBT experience. In

response to the assessment, the program identified recommendations to address the comments, such as educating the users on the importance of new processes and relying on leadership to drive system user adoption.

However, the remaining activities were only partially consistent with leading practices.

- **Increasing workforce skills and competencies.** The FMBT program's plans outlined core training, iFAMS system training, and sustainment training to build knowledge to support successful system adoption.<sup>19</sup> The program also conducted many activities, such as training and developing guides for users to increase workforce skills and competencies. For example, according to documentation from the FMBT program's deployment readiness review, the program conducted iFAMS system training classes for NCA and VBA-GOE users. Further, the program developed multiple desk guides, quick reference guides, and other reference material to support end users during training and post go-live.

However, few users completed core competency training for NCA. According to the program's organizational change strategy, core competency training was intended to build foundational financial management and accounting skills, which end users may require prior to system training. According to the program, 21 NCA users (about 3 percent) completed core competency training. As a comparison, over 1,000 users (about 98 percent) from VBA completed core competency training. NCA officials said that because NCA was the first wave, development and training coincided, and NCA prioritized performing cutover activities over the core competency training. However, because fewer NCA users completed core competency training, they may not have built recommended foundational financial management and accounting skills to support transition to the new system.

- **Assessing the readiness for change.** The FMBT program's organizational change management plans outlined organizational and workforce readiness activities to gauge capacity and receptivity to the change. The plans also included quarterly organizational change management surveys to collect feedback from stakeholders to

---

<sup>19</sup>Core competency training builds foundational financial management and accounting skills, which end users may require prior to system training. System training is instructor-led classroom or virtual training leveraging power point presentations, system demonstrations, and independent exercises on step-by-step scenarios. Sustainment training provides regular opportunities for existing system users to improve their skills, access refresher training, or both.

measure support for and confidence in the program. Further, the program conducted four organizational change assessments for the NCA wave and seven for the VBA-GOE wave.

However, the FMBT program did not always follow its plans for the organizational change assessments for the NCA wave. Specifically, NCA planned to conduct three organizational change assessments prior to the planned go-live to measure change readiness and one survey after the go-live to measure change management aspects of knowledge, ability, and reinforcement of the change. However, after go-live was delayed because of the COVID-19 pandemic, NCA officials requested that the third organizational change assessment be delayed until after go-live. The assessment was delayed because NCA officials wanted to avoid overwhelming users and allow for the completion of makeup training classes. As a result, while the program planned quarterly assessments, 9 months passed between organizational change assessments for the NCA wave, and the program did not have an accurate assessment of stakeholders' readiness prior to go-live. VA generally conducted organizational change assessments as planned for VBA.<sup>20</sup>

- **Assessing the results of change.** The FMBT program's organizational change management plans noted that the program must regularly track organizational and user adoption levels. The plans also noted that customer support activities are critical to monitor and sustain user adoption of iFAMS. The program conducted organizational change assessments after go-live and conducted Hypercare activities to support user adoption of iFAMS. Following the post go-live organizational change assessment, the FMBT program also collected customer experience metrics to gauge users' adoption of the change. The program planned to continue collecting feedback quarterly for 2 years after implementation.

However, the FMBT program's customer experience questionnaire only included one question that aligned to its organizational change assessment, related to users' ability. Program officials said that after go-live, the core focus was on users' ability to use the system to complete their job functions. In November 2021, program officials said that in future deployments the program planned to modify customer

---

<sup>20</sup>The FMBT program planned to conduct organizational change assessments in June 2020, August 2020, December 2020, January 2021, March 2021, April 2021, and June 2021. It reported on organizational change assessments in July 2020, September 2020, February 2021, April 2021, May 2021, June 2021, and September 2021. They were not always quarterly because assessments were conducted for two phases of the wave and corresponded with key milestones.

experience questions to better align with questions from the organizational change assessment surveys. Without adequately measuring user adoption, the FMBT program does not yet have assurance that the change has been successfully reinforced and sustained.

Results of organizational change assessments following NCA and VBA-GOE go-live and customer experience survey questions corroborated our findings on the need for improvements in organizational change management activities. Specifically, results from the organizational change assessments following NCA's and VBA's go-live indicated that users were not satisfied with the new system.<sup>21</sup> Similarly, the VBA-GOE organizational change assessments also showed a decline after go-live, though generally the VBA-GOE organizational change assessment results did not decline as far as NCA's.<sup>22</sup> Further, the results from the customer experience survey for NCA indicated that the percentage of positive responses increased but still indicated a significant portion of negative responses.<sup>23</sup>

The program's organizational change activities were not always consistent with leading practices, according to program officials, because NCA prioritized activities for subject matter experts because they were needed to address multiple organizational change management and development tasks simultaneously. In addition, program officials said that NCA and VBA-GOE were the first waves implemented, and the program recognized that there were opportunities to improve its change management approach based on lessons learned from these waves.

Because the FMBT program did not always follow its planned approach for increasing workforce skills and periodically assessing readiness for

---

<sup>21</sup>Organizational change assessment questions aligned to elements of awareness, desire, knowledge, ability, and reinforcement. The program planned a baseline of 51 percent positive responses; however, the responses for NCA were between 2 and 36 percent below the established baselines for all change elements. The program inadvertently asked a question that did not align to an intended element. We omitted the results to that question in this calculation.

<sup>22</sup>Responses to the VBA-GOE organizational change assessment for its second phase were between 3 and 22 percent below the established baseline for three change elements, and 6 percent above the target for one change element.

<sup>23</sup>Specifically, for the one question that aligned with the organizational change assessment—whether the system met the users' daily needs—the percentage of users who responded positively increased. However, 30 percent responded positively, while 25 percent responded neutrally and 45 percent responded negatively.

change, the transition to the new system was not as smooth as it could have been. In addition, the program does not yet have assurance that the result of the change has been successfully adopted by stakeholders. Without consistently following the planned approach for the transition to iFAMS, program officials will not be able to ensure a smooth transition for future deployments.

---

## FMBT Program's Data Migration Activities Were Consistent with Leading Practices, but the Timing Negatively Impacted Some Users

The FMBT program established a process for migrating data in the NCA and VBA-GOE waves that was consistent with leading practices.<sup>24</sup> However, the conversion timing caused difficulties for some NCA and VBA-GOE users, including impacts to productivity and the need to use work-arounds to get complete information.

---

## FMBT Program's Data Migration Was Consistent with Leading Practices

The FMBT program data migration activities were consistent with federal leading practices related to data migration.<sup>25</sup> Specifically, the program's data migration process was consistent with nine applicable leading practices from the Joint Financial Management Improvement Program (JFMIP) white paper on data conversion.<sup>26</sup> In addition, the program's data migration process was consistent with seven applicable leading practices from the General Services Administration's (GSA) *Modernization and*

---

<sup>24</sup>We reviewed data migration for the NCA and VBA-GOE waves, which includes data cleansing activities to ensure that data migrated from the legacy system are accurate and the data conversion process of extracting, transforming, loading, and validating data being moved from the legacy system into iFAMS.

<sup>25</sup>General Services Administration, *Modernization and Migration Management (M3) Playbook*, accessed Feb. 2, 2021, <https://www.ussm.gov/m3>; Joint Financial Management Improvement Program, *White Paper: Financial Systems Data Conversion – Considerations* (2002).

<sup>26</sup>Joint Financial Management Improvement Program, *White Paper: Financial Systems Data Conversion – Considerations*.

---

*Migration Management (M3) Playbook* on data cleansing, conversion, and migration.<sup>27</sup>

According to the JFMIP white paper, financial systems data conversion is a complex and difficult task, and converting data incorrectly can have long-term repercussions. The white paper provides financial systems data conversion considerations for financial management executives and project managers to address when planning and implementing a new financial management system.

JFMIP establishes three different phases for data conversion activities.

- **Preconversion phase** includes the activities leading up to conversion, such as developing a conversion plan, defining functions and data used in the legacy system, defining functions and data needed in the new system, determining security rights, determining data conversion requirements, mapping data from the legacy system to the new system, cleansing data, and validating data.
- **Cutover phase** includes the activities in the process of converting data into the new system. During this phase, a cutover plan is developed, cutover tasks are executed, and reconciliations of converted data are performed.
- **Postinstallation phase** is the final phase where data integrity is verified. It includes confirming that converted data are functioning as designed, performing postconversion data cleanup, archiving master and transaction files, and archiving or warehousing closed account data.

The FMBT program's data conversion activities were consistent with applicable JFMIP leading practices for migrating data in each of the three phases (see table 3).

---

<sup>27</sup>General Services Administration, *Modernization and Migration Management (M3) Playbook*.

**Table 3: Evaluation of Financial Management Business Transformation (FMBT) Program Data Migration Process against Applicable Joint Financial Management and Improvement Program Leading Practices**

Category	Leading practice	GAO assessment
Preconversion	Conduct general preconversion activities	Consistent
Preconversion	Perform data cleansing activities	Consistent
Preconversion	Establish and test data and configurations	Consistent
Cutover	Develop cutover plan	Consistent
Cutover	Determine go/no go decision	Consistent
Cutover	Execute cutover tasks	Consistent
Cutover	Reconcile converted data	Consistent
Postinstallation/operations	Confirm that converted data are functioning as designed	Consistent
Postinstallation/operations	Perform postconversion data cleanse	Consistent
Postinstallation/operations	Archive master and transaction files and closed account data <sup>a</sup>	Not applicable

Legend: Consistent = VA provided complete evidence that satisfies the entire criterion. Partially consistent = VA provided evidence that satisfies some but not all of the criterion. Not consistent = VA provided no evidence that satisfies the criterion.

Source: GAO analysis of Department of Veterans Affairs' (VA) FMBT program documentation. | GAO-22-105059

<sup>a</sup>We did not assess this area against leading practices because the legacy system remains in use and will continue to be in use until the department fully migrates to the new system.

As shown in the table, the following activities were consistent with JFMIP data migration leading practices.

- Conduct general preconversion activities.** The FMBT program developed a detailed conversion plan that includes the scope of the conversion and time frames. The program also had documentation of the legacy system function and data, including what data are used, how they are used, and who uses the information; identified what systems the legacy system receives data from and what other systems it feeds into; defined the functions and data needed in the new system; determined security roles and access; established a risk management process that categorized risks in the system; and determined data conversion requirements, including defining and mapping data elements in the system.
- Perform data cleansing activities.** The FMBT program developed an overall data cleansing plan, which established criteria for cleansing data, and a wave-specific data cleansing plan for VBA-GOE. The program leveraged the Financial Services Center's subject matter expertise to conduct data cleansing activities prior to cutover for NCA and VBA-GOE, which included gathering data in model workbooks, applying criteria to determine data that may need corrective action, correcting source system data when necessary, and documenting the process in monthly activity trackers.

- **Establish and test data and configurations.** The FMBT program tested data conversion through a series of mock conversions. A mock conversion is a dress rehearsal of the conversion activities required when converting data into a new system. One expert suggests that three or four mock conversions are needed to achieve optimal results. The program ran seven full mock conversions for NCA and seven full mock conversions for VBA-GOE, documented the results, and cleaned up data issues uncovered.
- **Develop cutover plan.** The FMBT program developed cutover plans for NCA and VBA-GOE phases 1 and 2 that included pre-cutover, cutover, and post-cutover steps.
- **Determine go/no go decision.** The FMBT Executive Steering Committee made go/no go decisions before go-lives occurred for NCA and VBA-GOE phases 1 and 2. The committee voted on October 26, 2020, to give final approval for NCA to go live on November 9, 2020. The committee voted on January 26, 2021, to give final approval to proceed with the VBA-GOE phase 1 go-live on February 8, 2021, and voted on April 30, 2021, to give final approval to proceed with VBA-GOE phase 2 on May 10, 2021.
- **Execute cutover tasks.** During the cutover process, the FMBT program rerouted automated inputs and interfaces to the new system and converted legacy data and loaded them into the new system following a predetermined sequence of entry.
- **Reconcile converted data.** The FMBT program reconciled data in the legacy system and iFAMS for the NCA and VBA-GOE conversions. The program also compared and reconciled reports from FMS with iFAMS. Adjustments to converted data were documented for the NCA and VBA-GOE conversions.
- **Confirm that converted data are functioning as designed.** After the conversion, the FMBT program confirmed that converted data were functioning as designed, assessed abnormalities that appeared, and verified that edits function as designed.
- **Perform postconversion data cleanse.** The FMBT program performed postconversion data cleanup for the NCA and VBA-GOE phases 1 and 2 conversions. According to FMBT officials, the postconversion data cleanse items are documented in a post-cutover action item list, which includes both remaining data cleanse items required and post-go-live actions needed within iFAMS.

GSA's playbook is a framework designed to help agencies achieve successful outcomes and reduce risk during system modernizations and

migrations. The Modernization and Migration Management (M3) framework is a compilation of leading project management practices, including data conversion and migration, for agencies seeking to modernize their systems. Developed by GSA using feedback from over 100 government and industry experts, the M3 playbook reflects leading practices and lessons learned from prior migrations.

The FMBT program’s data conversion activities were consistent with the seven applicable M3 leading practices during its data migration to iFAMS at NCA and VBA-GOE (see table 4).<sup>28</sup>

**Table 4: Evaluation of Data Migration Process against Selected Modernization and Migration Management Leading Practices**

Leading practice	GAO assessment
Allocate a sufficient number of subject matter experts with the appropriate skills to support data conversion activities throughout implementation.	Consistent
Begin the data cleansing activities prior to migration and continuously throughout the implementation to assist with data readiness.	Consistent
Gain agreement on data governance, including metadata management and data quality management.	Consistent
Establish criteria and metrics through the data governance model on what threshold constitutes clean data.	Consistent
Incorporate additional post-go-live data cleansing and quality activities into a data conversion strategy, schedule, and resource planning.	Consistent
Conduct multiple mock conversions to mitigate complex conversion risks.	Consistent
Include enough time in the integrated master schedule to correct anomalies and update conversion programs.	Consistent

Legend: Consistent = VA provided complete evidence that satisfies the entire criterion. Partially consistent = VA provided evidence that satisfies some but not all of the criterion. Not consistent = VA provided no evidence that satisfies the criterion.

Source: GAO analysis of Department of Veterans Affairs’ (VA) Financial Management Business Transformation program documentation. | GAO-22-105059

As shown in the table, the following activities were consistent with M3 leading practices for system modernizations and migrations.

- Allocate a sufficient number of subject matter experts with the appropriate skills to support data conversion activities throughout implementation.** VA used data subject matter experts to validate data management requirements, provide expert knowledge of source data, assess source data quality, and assess master data relationships and business rules. The FMBT program is monitoring

<sup>28</sup>To determine which leading practices from past migrations were applicable from the M3 playbook, we identified leading practices from past migrations related to data cleansing, conversion, and migration that were not specific to agencies using shared service providers.

this issue as one of the top current risks associated with the data migration process. The data management strategy says that stakeholder engagement has been positive, but more consistent availability will be required in future deployments and more dedicated subject matter experts from within the administrations and the Financial Services Center will be needed in the future, especially when concurrent wave development becomes more common.

- **Begin the data cleansing activities prior to migration and continuously throughout the implementation to assist with data readiness.** For the NCA and VBA-GOE waves, data cleansing was performed using both automated and manual methods. Data cleansing progress was documented each month in model workbooks, which include general information about model analysis being done, the population of transactions to be reviewed, and transactions identified that need review and potential corrective action, as well as a monthly activity tracker summarizing all reviewed transactions. For NCA, data cleansing activities began in January 2019, with data cleansing activities occurring each month until October 2020. For VBA-GOE, data cleansing activities started in November 2019 and continued through April 2021.
- **Gain agreement on data governance, including metadata management and data quality management.** In 2019, the FMBT program's Data Director approved version 4.0 of the data governance model, which included metadata management and data quality management activities. For metadata management, the program has a data dictionary that is updated with each wave and represents the metadata of the target iFAMS data.
- **Establish criteria and metrics through the data governance model on what threshold constitutes clean data.** The data governance model states that the data cleansing plan provides an overarching approach to cleansing financial and acquisition data in preparation for data conversion to iFAMS. The FMBT program's data cleansing plan defines clean data as data that pass all cleansing tests. The plan has an extensive list of data cleansing criteria for 17 different topics, including general ledger, vendor files, miscellaneous vendors, requisition validation, and obligations.
- **Incorporate additional post-go-live data cleansing and quality activities into a data conversion strategy, schedule, and resource planning.** The FMBT program's conversion strategy shows audit and data cleanup support as one of the implementation activities. It also states that the data conversion team will deliver a postconversion and continual data quality plan in the event that any postconversion

modification of data is needed. The program did not incorporate specific post-go-live data cleansing activities into the conversion strategy, but it did complete post-go-live data cleansing and quality activities for the NCA and VBA-GOE waves. According to VA, the FMBT program issues a post-cutover action item list with each go-live, which includes remaining cleansing required and post-go-live actions needed within iFAMS. The conversion strategy also includes post-go-live data quality activities to confirm that the data from the source system accurately migrated from the source system in a usable state.

- **Conduct multiple mock conversions to mitigate complex conversion risks.** The FMBT program conducted seven mock conversions for NCA and seven mock conversions for VBA-GOE. Since VBA-GOE was converted in two phases, full mock conversions needed to address both phase 1 and phase 2 data. To reflect this, the final two mock conversions for each phase contained only the data for its respective phase, meaning VBA-GOE full mock conversions 4 and 5 used only phase 1 data and VBA-GOE full mock conversions 6 and 7 used only phase 2 data. The success criterion for the mock conversions was to achieve a 95 percent record load success rate, which was surpassed for both NCA and VBA-GOE phases 1 and 2. During NCA full mock conversion 7, the last full mock conversion for NCA, only two transactions were rejected out of 17,665 transactions loaded, which gave NCA a 99.99 percent record load success rate. During VBA-GOE full mock conversion 5, the last full mock conversion for VBA-GOE phase 1, 93 transactions were rejected out of 27,988, giving VBA-GOE a 99.66 percent success rate. During VBA-GOE full mock conversion 7, the last full mock conversion for VBA-GOE phase 2, only four transactions were rejected out of 23,578 transactions loaded, giving VBA-GOE a 99.98 percent success rate.
- **Include enough time in the integrated master schedule to correct anomalies and update conversion programs.** The NCA and VBA-GOE schedules included multiple activities over time to correct anomalies: data conversion requirements and unit test sprints, completing a monthly report on cleanse defects, conducting mini-mock conversions, and conducting full mock conversions.

By continuing to follow leading practices to cleanse, convert, and migrate data, VA will help ensure in future deployments that clean financial data will be accurately converted to the new system.

## Conversion Timing Caused Difficulties for Some Users

The FMBT program used an open transaction conversion methodology to convert data for NCA and VBA-GOE, which according to the program, is a Momentum best practice.<sup>29</sup> All open transactions, defined as transactions with open obligations at the time of cutover, were migrated into iFAMS. Closed transactions were migrated into iFAMS as summarized general ledger balances. See table 5 for a summary of the types of data converted into iFAMS.

**Table 5: Data Converted into the Integrated Financial and Acquisition Management System (iFAMS) for National Cemetery Administration and Veterans Benefits Administration General Operating Expenses**

Data type	Description
Open transactions	Open transactions are migrated into iFAMS so VA's three administrations can continue their normal workflow.
Summarized balances	Closed transactions are only migrated as summarized general ledger balances to maintain a complete financial record.
Reference data	Vendors, accounting elements, and other reference data are updated to meet accounting classification structure standards and loaded into iFAMS.
Budgets	Administration appropriations and budgets are loaded into iFAMS to permit continuity of operations.

Source: GAO analysis of Department of Veterans Affairs' (VA) Financial Management Business Transformation program documentation. | GAO-22-105059

Under this method, the later in the fiscal year a conversion occurs, the higher the risk, since there will be more fiscal year expenditures later in the year and more closed obligations that will convert to the new system as summarized general ledger balances. The JFMIP white paper states that a midyear conversion is riskier and more difficult to manage because it requires careful consideration to determine the timing of conversion for open transactions and balances, since new activity may be taking place concurrently. This places a greater burden on managing cutoff dates, timelines, internal controls, and reconciliations.

Prior to the NCA and VBA-GOE go-lives, the FMBT program's independent verification and validation team recommended that the program be aware of the potential risks to a midyear conversion and proactively mitigate these risks for the NCA wave. The team also recommended that additional consideration to a midyear versus beginning-year conversion be evaluated for future, larger waves. Program officials accepted the independent verification and validation team

<sup>29</sup>The FMBT program office defined open transactions as any part of an unexpired contract that was not closed out and all open obligations regardless of contract status.

recommendation and were aware of the risks of conversion during the year but did not include midyear conversions in the risk and issue register. Program officials stated that the independent verification and validation contractor did not conduct a follow-up process review to confirm the implementation of the recommendation in the subsequent deployment because the support contract ended in April 2020.

According to FMBT program officials, NCA was as close to a beginning-of-the-year conversion as VA could have done, as the legacy system takes a while to do closeout activities between fiscal years. FMBT program officials stated that VBA-GOE chose to do conversions during the year to minimize the impact on staff at the time of financial year-end close.

However, in our structured interviews with NCA and VBA-GOE iFAMS users, we found that the FMBT program's conversion timing during the year caused difficulties for some NCA and VBA-GOE users. For example, some users reported impacts to productivity and the need to use work-arounds to get complete information since not all transactions and balances were converted into iFAMS. According to a VBA-GOE program advisor, this method had a larger impact on VBA-GOE than NCA because VBA-GOE implemented iFAMS later in the fiscal year and had more fiscal year 2021 expenditures and closed obligations in the legacy system to convert to the new system.

NCA and VBA-GOE users noted the following challenges related to the conversion during our structured interviews.

- Four of 14 NCA users and six of 14 VBA-GOE users discussed issues with transactions and documents, such as obligating documents, not converting into the new system. For example, one NCA user said that data the user thought would have been transferred from the legacy system to iFAMS stayed in the legacy system. The NCA user also said that the data in the new system are not wrong, but users still need to use the legacy system to know what the funding is for certain items. Another NCA user said that it was a challenge dealing with partial balances that were brought over, instead of full ones. The NCA user gave the example of a \$100 contract where \$25 was disbursed in the legacy system and a balance of \$75 was brought over into the new system and had three lines. The user has to go back to the legacy system to see if the \$25 that was disbursed has been completely executed, which is creating resource challenges in NCA.

- Six of 14 VBA-GOE users and two of 14 NCA users discussed having to pull data from the legacy system or combine legacy system and iFAMS reports or data. One VBA-GOE user said the user wished VA could have implemented the new system at the beginning of the fiscal year so data did not have to be pulled from both the legacy system and iFAMS. The user gave an example of an obligation being set up in FMS for \$100,000. Since \$50,000 was expended, the remaining \$50,000 open amount was brought into iFAMS, while the previously expended portion is still in the legacy system. Another VBA-GOE user stated that because the go-live was in the middle of a fiscal year, half of the data are in the legacy system and half are in iFAMS. The VBA-GOE user stated that this has been challenging because the user has to look at both systems and piece it together. The user further stated that the user could not rely on the reports because only the general operating expense funds had been transferred, but there were still veterans' entitlement funds and data from the first and second quarters in the legacy system.
- Nine of 14 NCA users and four of 14 VBA-GOE users mentioned that the challenges related to the conversion to the new financial system decreased or greatly decreased productivity. For example, one VBA-GOE user stated that the user has to prepare suspense transfers in the legacy system and transfer data from the legacy system to iFAMS. The user said that the overall process is much longer and what used to take five steps now takes over 20 steps. The user further stated that it was taking a lot more time to reconcile data and make sure that they have accurate year-to-date amounts for finance summaries.
- Three of 14 VBA-GOE users mentioned having to use both iFAMS and the legacy system to get an accurate status of funds. For example, one VBA-GOE user stated that retrieving the data to understand the status of funds was challenging. The user said that this was time consuming and required a lot of effort to examine each transaction to determine what stayed in the old system and what was converted to the new system.

According to FMBT program officials, given the size of VA, conversions during the year are unavoidable and necessary if VA is to implement iFAMS throughout the department in a reasonable amount of time. Program officials said the program uses open transaction conversion because of the amount of data that needs to be migrated into the new system. Converting everything over, including closed balances, would require more time to cleanse and convert the data and would increase the risk of bad data being transferred into the new system. According to FMBT program officials, the program accepted the risk of midyear

conversions and used existing project management processes within the program to mitigate the risk. FMBT program officials told us that the program is aware of the increased complexity involved with conversions during the year, but the timing of the cutovers was at the request of the user community, which has defined year-end as a blackout period for moving to a new system.

FMBT program officials stated that the difficulties NCA and VBA-GOE users encountered when trying to see complete budget or financial summaries have provided lessons learned, which the program will use to mitigate risks in future deployments. According to program officials, the program has also planned some actions to address issues resulting from conversions during the year and to aid current users' experience in iFAMS. For example:

- The program is introducing a new report to accommodate reporting of activity converted midyear. This report incorporates data reflecting pre-cutover disbursement balances in addition to post-cutover activity, which allows users to see a complete picture for the fiscal year.
- The FMBT program is currently designing and developing a pre- and postconversion report that combines preconversion obligation data from FMS with postconversion obligation data from iFAMS. According to FMBT program officials, this report will enable users to understand historical impact of transactions in the legacy system, and to track disbursement activity throughout the purchasing chain across both systems. This report is intended to provide a complete picture of a given transaction chain and remove barriers presented by conversion from one system to another.

Although FMBT program officials described some planned actions to us, the program's risk and issue register does not include or address the risks and issues related to mid-to-late-year conversions impacting users. Addressing user challenges caused by conversions during the year, including lengthy workarounds and decreased productivity, is especially important for future deployments. Several of these deployments are scheduled even later in the year and will be more complex and will impact a larger group of users than the NCA and VBA-GOE deployments.

---

## Conclusions

The FMBT program has made important progress toward establishing metrics and baselines that it has used to begin reporting on the delivery of

operational benefits from implementing iFAMS. Further, program officials were proactive in using available system data and user feedback as the basis for undertaking improvements to the program and iFAMS. Nevertheless, because the program has not yet established performance targets, it is limited in reporting metrics that compare results to baselines. While this approach yields useful information, it does not provide a thorough demonstration of the degree to which iFAMS is delivering expected operational benefits or help identify the extent to which corrective actions are needed to maximize the return on its multibillion-dollar investment.

The FMBT program's organizational change management activities were consistent with four leading practices and partially consistent with the remaining three. Because the program did not always follow its planned approach for increasing workforce skills and periodically assessing readiness for change, the transition to the new system was not as effective as it could have been. In addition, the program does not yet have assurance that the change has been successfully adopted by stakeholders. Without consistently following recognized practices for effective change management, program officials will not be able to ensure an effective transition for future deployments.

Financial systems data conversion is a complex and difficult task that can have long-term repercussions to an entity's financial management. The FMBT program established a process for cleansing and converting data for the NCA and VBA-GOE waves consistent with leading practices. However, the conversion timing caused difficulties for some NCA and VBA-GOE users. While the program has planned some actions to address difficulties that users faced, addressing the risks and issues caused by conversions during the year, such as lengthy work-arounds and decreased productivity, is especially important for future deployments that are scheduled even later in the year.

---

## Recommendations for Executive Action

We are making the following six recommendations to VA:

The FMBT Deputy Assistant Secretary should establish target values for operational and customer experience metrics to allow the program to measure progress over time. (Recommendation 1)

---

The FMBT Deputy Assistant Secretary should report metrics in relation to target values to help ensure that operational benefits are delivered as intended. (Recommendation 2)

The FMBT Deputy Assistant Secretary, in coordination with appropriate offices within VA, should facilitate the increase of workforce skills and competencies through user completion of core competency training. (Recommendation 3)

The FMBT Deputy Assistant Secretary should ensure that the FMBT program's organizational change management activities assess the readiness for change by conducting organizational change assessments as planned. (Recommendation 4)

The FMBT Deputy Assistant Secretary should ensure that the FMBT program's organizational change management activities adequately assess the results of change by following through on plans to align customer experience questions with organizational change assessments. (Recommendation 5)

The FMBT Deputy Assistant Secretary should include conversion timing risks and issues in the FMBT program's risk and issue register and mitigate the risks and issues for future deployments. (Recommendation 6)

---

## Agency Comments

We provided a draft of this report to VA for review and comment. In its written comments, reproduced in appendix IV, VA concurred with our six recommendations and described actions it has taken and will take to address the issues we identified with the FMBT program. Those actions, if implemented as described, should address our recommendations.

As agreed with your offices, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days from the report date. At that time, we will send copies of this report to the appropriate congressional committees, the Secretary of Veterans Affairs, and other interested parties. In addition, the report will be available at no charge on the GAO website at <https://www.gao.gov>.

If you or your staff have any questions about this report, please contact Paula M. Rascona at (202) 512-9816 or [rasconap@gao.gov](mailto:rasconap@gao.gov) or Carol C. Harris at (202) 512-4456 or [harriscc@gao.gov](mailto:harriscc@gao.gov). Contact points for our

---

Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix V.



Paula M. Rascona  
Director, Financial Management and Assurance



Carol C. Harris  
Director, Information Technology and Cybersecurity

*List of Requesters*

The Honorable Jon Tester  
Chairman  
The Honorable Jerry Moran  
Ranking Member  
Committee on Veterans' Affairs  
United States Senate

The Honorable Chris Pappas  
Chairman  
The Honorable Tracey Mann  
Ranking Member  
Subcommittee on Oversight and Investigations  
Committee on Veterans' Affairs  
House of Representatives

The Honorable Frank Mrvan  
Chairman  
The Honorable Matt Rosendale  
Ranking Member  
Subcommittee on Technology Modernization  
Committee on Veterans' Affairs

---

Letter

---

House of Representatives

The Honorable Jim Banks  
House of Representatives

The Honorable Jack Bergman  
House of Representatives

The Honorable Susie Lee  
House of Representatives

---

## Appendix I: Objectives, Scope, and Methodology

The objectives of this report were to examine the extent to which (1) the Department of Veterans Affairs (VA) has measured if the Integrated Financial and Acquisition Management System (iFAMS) is providing intended operational benefits; (2) VA's organizational change management activities facilitating its transition to the new financial management system for the National Cemetery Administration (NCA) and the Veterans Benefits Administration (VBA) General Operating Expenses (GOE) were consistent with leading practices; and (3) VA's data migration activities to cleanse, convert, and migrate NCA and VBA-GOE data to the new financial management system were consistent with leading practices.

To determine the extent to which VA has measured if iFAMS is providing intended operational benefits, we did the following:

- We examined the Financial Management Business Transformation (FMBT) program's plans and process for measuring and reporting on performance; identified the program's goals, metrics, baseline measures, and target values; and compared those practices to leading practices.<sup>1</sup> We conducted a review of federal guidance and leading practices for metrics. Based on that review, we identified and selected applicable foundational practices for measuring VA's operational benefits and user satisfaction. We also examined the actual metrics reported from the NCA and VBA-GOE waves to

---

<sup>1</sup>GAO, *Information Technology Investment Management: A Framework for Assessing and Improving Process Maturity*, [GAO-04-394G](#) (Washington, D.C.: Mar. 2004); GAO, *Managing for Results: Enhancing Agency Use of Performance Information for Management Decision Making*, [GAO-05-927](#) (Washington, D.C.: Sept. 9, 2005); GAO, *Agile Assessment Guide: Best Practices for Agile Adoption and Implementation*, [GAO-20-590G](#) (Washington, D.C.: Sept. 2020); Office of Management and Budget (OMB), *Managing Information as a Strategic Resource*, OMB Circular No. A-130 (July 2016); Office of Management and Budget, *Preparation, Submission, and Execution of the Budget*, OMB Circular No. A-11 (Dec. 2020); General Services Administration, *Modernization and Migration Management (M3) Playbook*, accessed Feb. 2, 2021, <https://www.ussm.gov/m3>; and Software Engineering Institute, *CMMI® for Acquisition, Version 1.3* (Nov. 2010). Our prior work also emphasizes attributes of performance measures; see GAO, *Defense Health Care Reform: Additional Implementation Details Would Increase Transparency of DOD's Plans and Enhance Accountability*, [GAO-14-49](#) (Washington, D.C.: Nov. 6, 2013), and *Electronic Health Records: Outcome-Oriented Metrics and Goals Needed to Gauge DOD's and VA's Progress in Achieving Interoperability*, [GAO-15-530](#) (Washington, D.C.: Aug. 13, 2015).

determine if the program was measuring and reporting the metrics as planned. We reviewed the extent to which metrics were being met and determined what VA did to identify reasons for not meeting the metrics, where applicable.

We assessed the reliability of metrics baseline data through manual checks for missing or duplicate data and obvious errors. We met with FMBT program officials regarding the approach and metrics results. We determined that the metrics were reliable for the purposes of our engagement.

- We conducted structured interviews with 28 selected users or user representatives of the NCA and VBA-GOE waves to obtain feedback about iFAMS implementation. We selected a judgmental sample of users that was supplemented by random selections in some instances to help mitigate against potential selection bias from agency recommendations. These users included managers representing the customer organization who were involved in the configuration process for the NCA and VBA-GOE waves, NCA and VBA users referred by managers as representative core users of the iFAMS system across the geographical districts, users suggested by interviewees based on identified subject matter expertise, and 10 random selections from NCA and VBA.

Of these interviewees, 14 were from NCA and 14 were from VBA. We also conducted seven interviews with officials from VA's Financial Services Center or the Debt Management Center that represented the program's value streams (i.e., business processes). However, we did not include results from these interviews so that our reporting would be consistent with VA's approach to measuring user satisfaction. Specifically, the program focused solely on users from NCA and VBA and did not include Financial Services Center or Debt Management Center staff in the scope of its formal customer experience surveys or organizational change assessments. In addition, the officials' experiences with the system were not comparable to those of NCA and the VBA users because several of these interviewees indicated that they were not day-to-day or regular users of the system or that they supported the system but did not use the system.

We tested our structured interview questions with three NCA product managers who represented NCA and one product manager from VBA. These managers had substantial domain knowledge regarding NCA's and VBA's environments and business processes. We analyzed the open-ended responses to our structured interview questions using systematic content analysis to identify key themes in comments on users' experience with the new financial system. An

analyst coded the structured interview response and a second analyst validated the coding. Any discrepancies were resolved by both analysts agreeing on the coding of the associated statement by the interviewee. If needed, a third analyst adjudicated any continued disagreement between coders. The results of our analysis of structured interviews are not generalizable to all users of the new financial management system.

- We also interviewed officials from NCA and VBA, including the Chief Financial Officer or staff from that office to understand how the reports from the new system met user needs and identify any subsequent improvements made.

To determine the extent to which VA's organizational change management activities facilitating its transition to the new financial management system at NCA and VBA were consistent with leading practices, we conducted a literature search for organizational change management leading practices.<sup>2</sup> We identified and selected common organizational change management activities that would be applicable to VA's transition. We then evaluated VA against these practices. In doing so, we examined program plans for organizational change management and discussed the program's approach with cognizant FMBT program, NCA, and VBA-GOE officials. We reviewed wave-specific documentation, such as stakeholder analysis, slides from site visits, change champion network meeting minutes, and organizational change readiness assessment reports, to assess whether the program's activities were aligned with its planned approach and leading practices.

We assessed the reliability of organizational change assessment survey results for the NCA and VBA-GOE waves by obtaining raw data and comparing them to reported results and noted any limitations found. For any questions about discrepancies in the data, we obtained written responses from agency officials explaining the methodology for converting raw data to reported data. We determined that the reported

---

<sup>2</sup>Project Management Institute, Inc., *Managing Change in Organizations: A Practice Guide* (Newtown Square, Pa.: 2013); Office of Personnel Management, *Migration Planning Guidance Information Documents, Change Management Best Practices* (Oct. 7, 2011); GAO, *Business Process Reengineering Assessment Guide*, version 3, [GAO/AIMD-10.1.15](#) (Washington, D.C.: May 1997); ISACA, *COBIT 2019 Framework* (2019); and Prosci, *The Prosci ADKAR® Model, A Goal Oriented Change Management Model to Guide Individual and Organizational Change*, accessed Feb. 21, 2021, <https://www.prosci.com/methodology/adkar>. ADKAR® is a registered trademark of Prosci, Inc.

organizational change assessment results were sufficiently reliable for our purposes of reporting the results of the organizational change assessments and noted any limitations.

To determine the extent to which VA's data migration activities to cleanse, convert, and migrate NCA and VBA data to the new financial management system were consistent with applicable leading practices, we conducted a review of federal guidance and leading practices and identified leading practices related to data cleansing, conversion, and migration.<sup>3</sup> We reviewed the leading practices in the Joint Financial Management Improvement Program white paper and grouped activities into nine practices based on conversion phase. To determine which leading practices from past migrations were applicable from the General Services Administration's modernization and migration management playbook, we identified leading practices from past migrations related to data cleansing, conversion, and migration that were not specific to agencies using shared service providers. We interviewed cognizant FMBT program officials and examined the program's data migration documentation, such as data cleansing and data conversion plans for NCA and VBA-GOE, mock conversion documentation, and cutover documentation, and compared its data migration process to leading practices.

To determine the effect of the conversion timing on users, we conducted structured interviews with 28 selected users or user representatives of the NCA and VBA-GOE waves to obtain their feedback. We also met with cognizant FMBT program officials and reviewed independent verification and validation team documentation. We compared the actions the program took to address midyear conversion risks to criteria from leading practices and recommendations from the program's independent verification and validation contractor.<sup>4</sup>

We conducted this performance audit from March 2021 to March 2022 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our

---

<sup>3</sup>General Services Administration, *Modernization and Migration Management (M3) Playbook*, accessed Feb. 2, 2021, <https://www.ussm.gov/m3>, and Joint Financial Management Improvement Program, *White Paper: Financial Systems Data Conversion – Considerations* (2002).

<sup>4</sup>Joint Financial Management Improvement Program, *White Paper: Financial Systems Data Conversion – Considerations*.

---

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

---

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

## Appendix II: Requirements Validation Process and Results for the Integrated Financial and Acquisition Management System

This appendix provides additional detail on how the Department of Veterans Affairs (VA) validated requirements for the Integrated Financial and Acquisition Management System (iFAMS) enterprise and wave-specific configurations. This additional detail is based on our review of requirements management plans, business process reengineering (BPR) documentation, requirements traceability matrices, and functional requirements documents, and interviews with knowledgeable VA officials to understand the process for validating requirements for the new system.

The iFAMS configuration is implemented in a layered approach, with three primary layers of configuration. The bottom layer is the standard baseline configuration of the commercially available off-the-shelf product selected (CGI Federal's Momentum application and cloud solution).<sup>1</sup> The middle layer is the standard VA business process configuration developed through the BPR workshop sessions. The bottom and middle layers make up the enterprise configuration and apply to the entire VA enterprise. The top layer is the wave-specific configurations needed for individual administrations or staff offices. According to program documentation, approximately 70 percent of the configuration is at the enterprise level, and 30 percent is specific to individual administrations and staff offices.

VA selected the U.S. Department of Agriculture (USDA) as its federal shared service provider in 2016 to guide VA's migration to CGI Federal's Momentum application and cloud solution. To select a shared service provider, VA used four scoring elements to evaluate federal shared service provider capabilities:

---

<sup>1</sup>A *Commercially available off-the-shelf item* refers to any item of supply that is a commercial product; sold in substantial quantities in the commercial marketplace; and offered to the government, under a contract, in the same form that it is sold in the commercial marketplace. 48 C.F.R. § 2.101(b).

- **Provider capabilities assessment:** VA asked the providers to rate their services in the areas of systems implementation, applications management, technology and hosting, and financial management.
- **Program risk:** The Financial Management Business Transformation (FMBT) program management office identified, documented, and scored individual provider risks in the areas of systems implementation, applications management, technology and hosting, and financial management.
- **Subject matter expert (SME) workshop scorecards:** VA held workshops to demonstrate each provider's system for SMEs from all VA administrations. More than 200 VA SMEs participated in the workshops and filled out workshop scorecards evaluating the systems on business process alignment, system ease of use, and business process knowledge.
- **SME final assessment:** For the final assessment questionnaire, SMEs assessed each provider in 22 categories.

As a result of its evaluation, VA identified USDA as the preferred federal shared service provider in every scoring element, and CGI Federal's Momentum solution was the system of choice.

---

## Enterprise Configuration Process

Requirements gathering for the FMBT program began with VA's initial FMBT BPR team. The team used financial management business requirements from the Financial and Logistics Integrated Technology Enterprise initiative, one of VA's past financial management modernization efforts, as the initial functional and technical requirements for the new system. These initial requirements were sent out to VA program advisors and SMEs for review and validation.

During fiscal years 2017 through 2018, the FMBT program developed the foundation for the iFAMS enterprise configuration. This included the development of the following:

- **Functional requirements:** High-level functional requirements inherited from previous financial management system implementations.

- **Target state process flows:** A consolidated depiction of the steps needed to carry out the processes within each value stream.<sup>2</sup>
- **User stories:** A business requirement stated from an end user's perspective. This is the primary means of expressing needed functionality.

Starting in March 2017, USDA and VA conducted BPR workshops to standardize, integrate, and streamline seven value streams:

- **Budget formulation to execution:** business processes that are associated with the budget formulation life cycle, budget distribution and execution, funds control, and reporting.
- **Request to procure:** business processes that describe the good or service to be obtained and comprise the procurement request package.
- **Procure to pay:** business processes that describe the procurement processes from managing approved requests for goods, equipment, construction, and services through receipt of items or service.
- **Reimbursable agreements:** business processes that describe the actions for producing the agreements, entering agreements into the system through order processing, tracking activities, and automating billing.
- **Bill to collect:** business processes that describe the financial management activities for receivables and debt management.
- **Record to report:** business processes that describe managing general ledger posting models, monitoring spending activity, processing payroll, and generating financial reports.
- **Acquire to dispose:** business processes that describe managing assets through their life cycle from defining an acquisition to a formal disposal.

During workshop sessions, SMEs identified potential gaps and submitted their findings to the FMBT program for solution development. A potential gap is a VA business need or requirement that a process area SME believes is unmet by Momentum.

---

<sup>2</sup>Value streams are end-to-end business processes that VA uses to describe its standardized financial and acquisition management processes. The FMBT program organizes configuration and testing efforts around these value streams.

**Appendix II: Requirements Validation Process and Results for the Integrated Financial and Acquisition Management System**

After SMEs identified gaps, program advisors validated the gaps. The BPR team then developed conceptual solutions and submitted proposed solutions to the VA program advisors, who then selected and validated a solution.

Gaps were categorized as follows:

- **Policy:** Related to a need for a change in VA policy. Policy gaps required VA leadership review.
- **Process:** Related to candidates for business process change, which may include changes to the standardized processes.
- **Set-up:** Related to VA system needs that can be met by Momentum capabilities. This type of gap is documented in the solution configuration, and Momentum is configured to address it.
- **System:** Related to capabilities that do not exist within Momentum.

According to the FMBT program’s BPR status dashboards, there were 285 gaps identified during the BPR workshops. The BPR gaps are summarized by value stream in table 6.

**Table 6: Business Process Reengineering Gaps by Value Stream**

Value stream	Policy	Process	Setup	System	Total gaps
Budget formulation to execution	4	2	54	0	60
Request to procure	2	4	31	69	106
Procure to pay	5	10	7	7	29
Reimbursable agreements	0	1	9	0	10
Bill to collect	2	2	6	11	21
Record to report	2	4	28	3	37
Acquire to dispose	2	1	19	0	22
<b>Total</b>	<b>17</b>	<b>24</b>	<b>154</b>	<b>90</b>	<b>285</b>

Source: GAO analysis of Department of Veterans Affairs’ Financial Management Business Transformation program documentation. | GAO-22-105059

In December 2017, when VA was in the middle of BPR workshops, USDA notified VA that it would no longer support the FMBT program effort because of internal audit and financial management challenges that USDA needed to address. As a result, USDA transitioned out of the shared service provider role in 2018, with VA taking over sole responsibility for FMBT program support. According to FMBT program officials, VA received the gaps and requirements documentation developed during BPR sessions from USDA and was able to continue the BPR process.

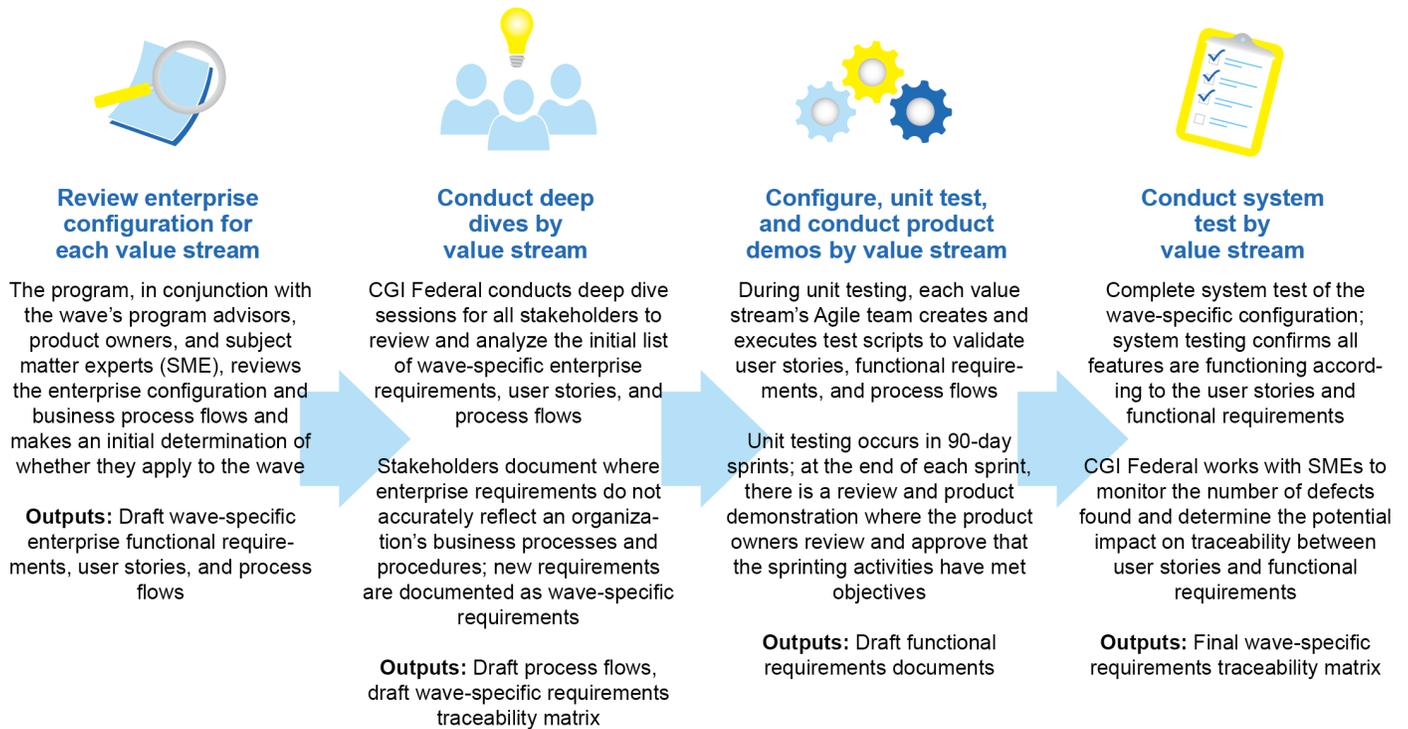
**Appendix II: Requirements Validation Process and Results for the Integrated Financial and Acquisition Management System**

After BPR workshops were completed, the program conducted configuration sessions with VA SMEs in September 2018. The BPR workshops and configuration sessions established the enterprise business requirements. The FMBT program conducted demonstrations of the enterprise configuration for program advisors in October and November 2018, then demonstrated the configuration for the Executive Steering Committee in December 2018.

**Wave-Specific Configuration Process and Results**

According to program documents, the wave-specific configuration process followed for the National Cemetery Administration (NCA) and the Veterans Benefits Administration (VBA) General Operating Expenses (GOE) has four main steps, which are described in figure 1.

**Figure 1: Wave-Specific Configuration Process**



Source: GAO analysis of Department of Veterans Affairs' Financial Management Business Transformation program documentation. | GAO-22-105059

First, the FMBT program, in conjunction with each wave's program advisors, product owners, and SMEs, reviewed the enterprise configuration and business process flows and made an initial determination of whether they applied to the wave. The outputs of this step are draft wave-specific enterprise functional requirements, user stories, and process flows.

Next, CGI Federal, the contracted vendor configuring Momentum for VA, conducted deep dive sessions with VA stakeholders. At the deep dive sessions, administration stakeholders reviewed and analyzed the initial list of requirements, user stories, and process flows and confirmed whether they met their needs. Stakeholders also documented where the enterprise requirements did not meet the organization's business processes and procedures. New requirements were documented as wave-specific requirements. The documentation developed from this step were draft process flows and a draft wave-specific requirements traceability matrix. The requirements traceability matrix was created to ensure that all functional requirements defined are tested and are traceable to features, user stories, and process flows.

The next step was to configure, unit test, and conduct product demonstrations by value stream. During unit testing, each value stream's project management team created and executed test scripts to validate user stories, functional requirements, and process flows. Unit testing occurred in 90-day sprints. At the end of each sprint, there was a review and product demonstration where the product owners reviewed and approved that the sprinting activities met objectives. This step resulted in draft functional requirements documents to identify and document the set of wave-specific functional requirements and user stories. According to the FMBT program, functional requirements documents also provide evidence of the revalidation of the initial enterprise set of requirements for each wave.

The final step was to conduct system testing by value stream. System testing confirms that all features are functioning according to the user stories and functional requirements. CGI Federal worked with SMEs to monitor the number of defects found and determine the potential impact on traceability between user stories and functional requirements. The wave-specific requirements traceability matrix is finalized after system testing is completed.

We reviewed the functional requirements documents for NCA and VBA-GOE. These documents provide the requirements and user stories

**Appendix II: Requirements Validation Process and Results for the Integrated Financial and Acquisition Management System**

developed during the NCA and VBA-GOE deep dives. There were seven functional requirements documents for NCA and seven for VBA-GOE. Both administrations had functional requirements documents for six of the seven value streams: budget formulation to execution, procure to pay, reimbursable agreements, bill to collect, record to report, and acquire to dispose.<sup>3</sup> NCA also had a functional requirements document for general system functional requirements, while VBA had an additional functional requirements document for security. There are different numbers of enterprise requirements identified during BPR sessions in the NCA and VBA-GOE functional requirements documents. This is because the NCA and VBA-GOE functional requirements documents only list the enterprise requirements relevant to the specific wave.

The 672 NCA functional requirements identified for each value stream are summarized in table 7.

**Table 7: Number of National Cemetery Administration (NCA) Functional Requirements**

Value stream <sup>a</sup>	Administration-specific functional requirements	Enterprise requirements from deep dives	Enterprise requirements from business process reengineering	Total requirements
Budget formulation to execution	7	2	56	<b>65</b>
Procure to pay	7	16	212	<b>235</b>
Reimbursable agreements	15	0	38	<b>53</b>
Bill to collect	24	0	64	<b>88</b>
Record to report	0	3	135	<b>138</b>
Acquire to dispose	0	0	48	<b>48</b>
General system <sup>a</sup>	0	0	45	<b>45</b>
<b>Total</b>	<b>53</b>	<b>21</b>	<b>598</b>	<b>672</b>

Source: GAO analysis of Department of Veterans Affairs' Financial Management Business Transformation program documentation. | GAO-22-105059

<sup>a</sup>NCA had a functional requirements document for six of the seven value streams: budget formulation to execution, procure to pay, reimbursable agreements, bill to collect, record to report, and acquire to dispose. NCA also had a functional requirements document for general system functional requirements. NCA did not have a functional requirements document for the request to procure value stream. Request to procure is an acquisition-related value stream, and requirements for that value stream are included in the Enterprise Acquisition wave.

The 557 VBA-GOE functional requirements identified for each value stream are summarized in table 8.

<sup>3</sup>Neither NCA nor VBA-GOE had a functional requirements document for the request to procure value stream. Request to procure is an acquisition-related value stream, and requirements for it are included in the Enterprise Acquisition wave.

**Appendix II: Requirements Validation Process  
and Results for the Integrated Financial and  
Acquisition Management System**

**Table 8: Number of Veterans Benefits Administration (VBA) General Operating Expenses (GOE) Functional Requirements**

<b>Value stream<sup>a</sup></b>	<b>Administration-specific functional requirements</b>	<b>Enterprise requirements from deep dives</b>	<b>Enterprise requirements from business process reengineering</b>	<b>Total requirements</b>
Budget formulation to execution	10	0	50	<b>60</b>
Procure to pay	9	3	208	<b>220</b>
Reimbursable agreements	0	0	40	<b>40</b>
Bill to collect	0	0	100	<b>100</b>
Record to report	0	0	83	<b>83</b>
Acquire to dispose	0	0	48	<b>48</b>
Security <sup>a</sup>	0	0	6	<b>6</b>
<b>Total</b>	<b>19</b>	<b>3</b>	<b>535</b>	<b>557</b>

Source: GAO analysis of Department of Veterans Affairs' Financial Management Business Transformation program documentation. | GAO-22-105059

<sup>a</sup>VBA-GOE had a functional requirements document for six of the seven value streams: budget formulation to execution, procure to pay, reimbursable agreements, bill to collect, record to report, and acquire to dispose. VBA-GOE also had a functional requirements document for security. VBA-GOE did not have a functional requirements document for the request to procure value stream. Request to procure is an acquisition-related value stream, and requirements for it are included in the Enterprise Acquisition wave.

## Enterprise Acquisition Wave

In September 2018, a joint FMBT program and Office of Acquisition, Logistics and Construction summit recommended that VA migrate finance users to iFAMS first, allowing them to stabilize, and then implement the iFAMS acquisition functionality for the same group of users. Prior to implementing acquisition functionality, a temporary interface between the Electronic Contract Management System and iFAMS will be used. The first iFAMS acquisition wave, the Enterprise Acquisition wave, is scheduled to go live at NCA in April 2022.

From April to July 2020, the FMBT program held deep dive sessions with VA stakeholders to revalidate and establish the enterprise requirements for acquisition. The revalidation reviewed process maps and gaps identified during initial BPR sessions, as well as recent process updates from current wave implementations, and enhancements made to the system to address gaps identified during BPR sessions. The revalidation deep dives focused on three main areas: defining the overall data conversion approach for the acquisition implementations, gaining an understanding of the acquisition security model that will feed into the iFAMS security configuration, and defining the Enterprise Acquisition processes that will drive the iFAMS acquisition configuration.

**Appendix II: Requirements Validation Process and Results for the Integrated Financial and Acquisition Management System**

The Enterprise Acquisition functional requirements document identified 242 total functional requirements: 19 new functional requirements added as part of the Enterprise Acquisition wave and 223 enterprise requirements from previous VA system implementations (see table 9). New requirements were sourced primarily from the General Services Administration (GSA) Federal Integrated Business Framework and VA product owners and SMEs.<sup>4</sup> According to program documentation, the independent verification and validation team reviewed the requirements from previous system implementations.

**Table 9: Financial Management Business Transformation (FMBT) Enterprise Acquisition Requirements from Previous System Implementations**

<b>Value stream</b>	<b>Number of requirements</b>
Request to procure	145
Procure to pay	17
Record to report	6
Relevant to multiple value streams <sup>a</sup>	26
General system	16
Other requirements <sup>b</sup>	13
<b>Total</b>	<b>223</b>

Source: GAO analysis of Department of Veterans Affairs' FMBT program documentation. | GAO-22-105059

<sup>a</sup>Twenty-six enterprise requirements identified were relevant to multiple value streams.

<sup>b</sup>Other requirements include nonfunctional, business intelligence, and converted documents requirements.

<sup>4</sup>According to the GSA website, the Federal Integrated Business Framework includes five components: (1) Federal business life cycles, service areas, functions, and activities serve as the basis for a common understanding of what services agencies need and solutions should offer. (2) Business capabilities are the outcome-based business needs mapped to federal government authoritative references, forms, and data standards. (3) Business use cases are a set of agency "stories" that document the key activities, inputs, outputs, and other lines of business intersections to describe how the federal government operates. (4) Standard data elements identify the minimum data fields required to support the inputs and outputs noted in the use cases and capabilities. (5) Performance metrics define how the government measures successful delivery of outcomes based on timeliness, efficiency, and accuracy targets.

# Appendix III: User Feedback on VA's New Financial Management System from Structured Interviews

The Department of Veterans Affairs (VA) is developing a new financial management system as part of its Financial Management Business Transformation (FMBT) program. We conducted structured interviews with 14 National Cemetery Administration (NCA) and 14 Veterans Benefits Administration (VBA) users to obtain their feedback on the new Integrated Financial and Acquisition Management System (iFAMS). The questions we asked in our structured interviews with users and user representatives of VA's new financial management system are shown below. Each structured interview comprised closed- and open-ended questions. In this appendix, we include aggregate results of responses to the closed-ended questions. For a more detailed discussion of our methodology for structured interviews, see appendix I.

## 1) How often do you use the new financial management system?

Category	Total	NCA	VBA
Almost every day	24	14	10
Several times a week	0	0	0
Approximately once a week	1	0	1
Several times a month	1	0	1
Approximately once a month	2	0	2
Never	0	0	0
Other – if so how often	0	0	0
<b>Total</b>	<b>28</b>	<b>14</b>	<b>14</b>

## 2) Compared to the Financial Management System (FMS) and/or Centralized Automated Accounting Transaction System (CAATS), how much time are you spending using the new financial system to perform your job tasks?

Category	Total	NCA	VBA
Much more time	11	9	2

**Appendix III: User Feedback on VA's New Financial Management System from Structured Interviews**

<b>Category</b>	<b>Total</b>	<b>NCA</b>	<b>VBA</b>
More time	4	1	3
About the same amount of time	5	1	4
Less time	1	0	1
Much less time	3	0	3
No basis to judge/Don't know	4	3	1
<b>Total</b>	<b>28</b>	<b>14</b>	<b>14</b>

**3) Do you agree or disagree with the following statements based on your current experience using the new financial system?**

**3a) The new system allows me to effectively perform the duties of my position.**

<b>Category</b>	<b>Total</b>	<b>NCA</b>	<b>VBA</b>
Strongly agree	4	1	3
Agree	10	2	8
Neither agree nor disagree	4	3	1
Disagree	4	3	1
Strongly disagree	5	5	0
No basis to judge	1	0	1
<b>Total</b>	<b>28</b>	<b>14</b>	<b>14</b>

**3b) The new system meets the expectations I had prior to and during go-live.**

<b>Category</b>	<b>Total</b>	<b>NCA</b>	<b>VBA</b>
Strongly agree	4	0	4
Agree	7	1	6
Neither agree nor disagree	3	1	2
Disagree	6	5	1
Strongly disagree	8	7	1
No basis to judge	0	0	0
<b>Total</b>	<b>28</b>	<b>14</b>	<b>14</b>

**3c) The new system is available when I need it.**

<b>Category</b>	<b>Total</b>	<b>NCA</b>	<b>VBA</b>
Strongly agree	14	7	7
Agree	12	5	7
Neither agree nor disagree	1	1	0
Disagree	1	1	0

**Appendix III: User Feedback on VA's New Financial Management System from Structured Interviews**

<b>Category</b>	<b>Total</b>	<b>NCA</b>	<b>VBA</b>
Strongly disagree	0	0	0
No basis to judge	0	0	0
<b>Total</b>	<b>28</b>	<b>14</b>	<b>14</b>

**3d) The new system performance is responsive (e.g., minimal time to load pages and respond to commands).**

<b>Category</b>	<b>Total</b>	<b>NCA</b>	<b>VBA</b>
Strongly agree	11	3	8
Agree	15	9	6
Neither agree nor disagree	0	0	0
Disagree	2	2	0
Strongly disagree	0	0	0
No basis to judge	0	0	0
<b>Total</b>	<b>28</b>	<b>14</b>	<b>14</b>

**3e) Financial data were migrated accurately from the old system to the new system.**

<b>Category</b>	<b>Total</b>	<b>NCA</b>	<b>VBA</b>
Strongly agree	1	0	1
Agree	8	3	5
Neither agree nor disagree	5	2	3
Disagree	7	4	3
Strongly disagree	3	3	0
No basis to judge	4	2	2
<b>Total</b>	<b>28</b>	<b>14</b>	<b>14</b>

**3f) Information in the new financial system is presented in a logical manner.**

<b>Category</b>	<b>Total</b>	<b>NCA</b>	<b>VBA</b>
Strongly agree	4	0	4
Agree	7	1	6
Neither agree nor disagree	6	4	2
Disagree	8	6	2
Strongly disagree	3	3	0
No basis to judge	0	0	0
<b>Total</b>	<b>28</b>	<b>14</b>	<b>14</b>

**3g) Work-arounds are necessary to perform the duties of my position.**

**Appendix III: User Feedback on VA's New Financial Management System from Structured Interviews**

<b>Category</b>	<b>Total</b>	<b>NCA</b>	<b>VBA</b>
Strongly agree	5	5	0
Agree	12	6	6
Neither agree nor disagree	4	2	2
Disagree	3	0	3
Strongly disagree	0	0	0
No basis to judge	4	1	3
<b>Total</b>	<b>28</b>	<b>14</b>	<b>14</b>

**3h) Compared to FMS and/or CAATS, the new FMBT system requires fewer steps to accomplish what I need to do.**

<b>Category</b>	<b>Total</b>	<b>NCA</b>	<b>VBA</b>
Strongly agree	1	0	1
Agree	1	0	1
Neither agree nor disagree	4	0	4
Disagree	9	4	5
Strongly disagree	9	7	2
No basis to judge	4	3	1
<b>Total</b>	<b>28</b>	<b>14</b>	<b>14</b>

**3i) I have been provided effective training on how to use the new system.**

<b>Category</b>	<b>Total</b>	<b>NCA</b>	<b>VBA</b>
Strongly agree	6	0	6
Agree	6	0	6
Neither agree nor disagree	4	4	0
Disagree	8	6	2
Strongly disagree	4	4	0
No basis to judge	0	0	0
<b>Total</b>	<b>28</b>	<b>14</b>	<b>14</b>

**3j) There is adequate support when I encounter problems with the new system.**

<b>Category</b>	<b>Total</b>	<b>NCA</b>	<b>VBA</b>
Strongly agree	6	0	6
Agree	9	3	6
Neither agree nor disagree	2	1	1
Disagree	8	7	1

**Appendix III: User Feedback on VA's New Financial Management System from Structured Interviews**

<b>Category</b>	<b>Total</b>	<b>NCA</b>	<b>VBA</b>
Strongly disagree	2	2	0
No basis to judge	1	1	0
<b>Total</b>	<b>28</b>	<b>14</b>	<b>14</b>

**3k) There is adequate resolution to problems I encounter with the new system.**

<b>Category</b>	<b>Total</b>	<b>NCA</b>	<b>VBA</b>
Strongly agree	6	1	5
Agree	8	2	6
Neither agree nor disagree	1	0	1
Disagree	10	8	2
Strongly disagree	2	2	0
No basis to judge	1	1	0
<b>Total</b>	<b>28</b>	<b>14</b>	<b>14</b>

**3l) Overall, I am satisfied with the new system.**

<b>Category</b>	<b>Total</b>	<b>NCA</b>	<b>VBA</b>
Strongly agree	2	0	2
Agree	10	2	8
Neither agree nor disagree	5	2	3
Disagree	4	4	0
Strongly disagree	7	6	1
No basis to judge	0	0	0
<b>Total</b>	<b>28</b>	<b>14</b>	<b>14</b>

**4) For each of the following topics, I'm going to ask whether you found it not at all challenging, slightly challenging, somewhat challenging, moderately challenging, extremely challenging, or no basis to judge.**

**4a) Ability to input accurate data into the new financial system**

<b>Category</b>	<b>Total</b>	<b>NCA</b>	<b>VBA</b>
Extremely challenging	6	5	1
Moderately challenging	5	2	3
Somewhat challenging	4	2	2
Slightly challenging	8	2	6
Not at all challenging	3	2	1
No basis to judge	2	1	1

**Appendix III: User Feedback on VA's New Financial Management System from Structured Interviews**

Category	Total	NCA	VBA
<b>Total</b>	<b>28</b>	<b>14</b>	<b>14</b>

**4b) Accuracy of system processing of data**

Category	Total	NCA	VBA
Extremely challenging	3	3	0
Moderately challenging	6	4	2
Somewhat challenging	6	3	3
Slightly challenging	4	1	3
Not at all challenging	5	2	3
No basis to judge	4	1	3
<b>Total</b>	<b>28</b>	<b>14</b>	<b>14</b>

**4c) Accuracy of data output from the new financial system**

Category	Total	NCA	VBA
Extremely challenging	7	6	1
Moderately challenging	6	3	3
Somewhat challenging	4	2	2
Slightly challenging	7	3	4
Not at all challenging	2	0	2
No basis to judge	2	0	2
<b>Total</b>	<b>28</b>	<b>14</b>	<b>14</b>

**4d) Training Quality**

Category	Total	NCA	VBA
Extremely challenging	9	8	1
Moderately challenging	4	1	3
Somewhat challenging	2	2	0
Slightly challenging	6	1	5
Not at all challenging	6	1	5
No basis to judge	1	1	0
<b>Total</b>	<b>28</b>	<b>14</b>	<b>14</b>

**4e) Training Quantity**

Category	Total	NCA	VBA
Extremely challenging	8	8	0
Moderately challenging	5	1	4
Somewhat challenging	5	3	2

**Appendix III: User Feedback on VA's New Financial Management System from Structured Interviews**

<b>Category</b>	<b>Total</b>	<b>NCA</b>	<b>VBA</b>
Slightly challenging	3	0	3
Not at all challenging	6	1	5
No basis to judge	1	1	0
<b>Total</b>	<b>28</b>	<b>14</b>	<b>14</b>

**4f) Performing Work-arounds**

<b>Category</b>	<b>Total</b>	<b>NCA</b>	<b>VBA</b>
Extremely challenging	6	5	1
Moderately challenging	6	4	2
Somewhat challenging	3	1	2
Slightly challenging	4	1	3
Not at all challenging	3	1	2
No basis to judge	6	2	4
<b>Total</b>	<b>28</b>	<b>14</b>	<b>14</b>

**4g) Support/Reporting Issues**

<b>Category</b>	<b>Total</b>	<b>NCA</b>	<b>VBA</b>
Extremely challenging	10	9	1
Moderately challenging	3	0	3
Somewhat challenging	1	1	0
Slightly challenging	6	2	4
Not at all challenging	8	2	6
No basis to judge	0	0	0
<b>Total</b>	<b>28</b>	<b>14</b>	<b>14</b>

**4h) Ticketing process**

<b>Category</b>	<b>Total</b>	<b>NCA</b>	<b>VBA</b>
Extremely challenging	5	5	0
Moderately challenging	5	4	1
Somewhat challenging	3	2	1
Slightly challenging	4	1	3
Not at all challenging	9	2	7
No basis to judge	2	0	2
<b>Total</b>	<b>28</b>	<b>14</b>	<b>14</b>

**4i) Productivity**

**Appendix III: User Feedback on VA's New Financial Management System from Structured Interviews**

<b>Category</b>	<b>Total</b>	<b>NCA</b>	<b>VBA</b>
Extremely challenging	9	8	1
Moderately challenging	0	0	0
Somewhat challenging	5	2	3
Slightly challenging	8	3	5
Not at all challenging	2	0	2
No basis to judge	4	1	3
<b>Total</b>	<b>28</b>	<b>14</b>	<b>14</b>

**4j) Accessibility/Ease of Use**

<b>Category</b>	<b>Total</b>	<b>NCA</b>	<b>VBA</b>
Extremely challenging	9	8	1
Moderately challenging	3	1	2
Somewhat challenging	3	0	3
Slightly challenging	6	2	4
Not at all challenging	7	3	4
No basis to judge	0	0	0
<b>Total</b>	<b>28</b>	<b>14</b>	<b>14</b>

**5) Overall, in what way has the new financial system affected your ability to perform the duties of your position?**

<b>Category</b>	<b>Total</b>	<b>NCA</b>	<b>VBA</b>
Very positive impact	2	0	2
Positive impact	3	1	2
Neither positive nor negative impact	8	2	6
Negative impact	5	3	2
Very negative impact	8	8	0
No basis to judge	2	0	2
<b>Total</b>	<b>28</b>	<b>14</b>	<b>14</b>

**6) How has the new financial system affected your productivity?**

<b>Category</b>	<b>Total</b>	<b>NCA</b>	<b>VBA</b>
Greatly increased productivity	0	0	0
Increased productivity	2	0	2
Neither increased nor decreased productivity	9	3	6
Decreased productivity	8	4	4
Greatly decreased productivity	5	5	0
No basis to judge	4	2	2

**Appendix III: User Feedback on VA's New Financial Management System from Structured Interviews**

Category	Total	NCA	VBA
<b>Total</b>	<b>28</b>	<b>14</b>	<b>14</b>

**7) Based on your experience processing transactions with the new financial management system, to what extent has the time required to process transactions increased or decreased compared to FMS/CAATS?**

Category	Total	NCA	VBA
Increased by a large extent	12	9	3
Increased by a small extent	4	0	4
Neither increased nor decreased	2	0	2
Decreased by a small extent	2	1	1
Decreased by a large extent	3	0	3
No basis to judge	5	4	1
<b>Total</b>	<b>28</b>	<b>14</b>	<b>14</b>

**8) How has the new FMBT system affected the effectiveness of financial processing and reporting of your organization?**

Category	Total	NCA	VBA
Greatly improved the effectiveness of financial processing and reporting	3	1	2
Improved the effectiveness of financial processing and reporting	4	0	4
Neither improved nor reduced the effectiveness of financial processing and reporting	3	1	2
Reduced the effectiveness of financial processing and reporting	7	4	3
Greatly reduced the effectiveness of financial processing and reporting	9	8	1
No basis to judge	2	0	2
<b>Total</b>	<b>28</b>	<b>14</b>	<b>14</b>

**9) How does your experience in using the new financial system at this point in time compare to your experience in using the new system at the time of go-live?**

Category	Total	NCA	VBA
Greatly improved the experience with the system since go-live	7	3	4
Slightly improved the experience with the system since go-live	16	8	8
Did not improve or worsen the experience with the system since go-live	4	2	2
Slightly worsened the experience with the system since go-live	0	0	0

**Appendix III: User Feedback on VA's New Financial Management System from Structured Interviews**

<b>Category</b>	<b>Total</b>	<b>NCA</b>	<b>VBA</b>
Greatly worsened the experience with the system since go-live	1	1	0
No basis to judge	0	0	0
<b>Total</b>	<b>28</b>	<b>14</b>	<b>14</b>

**10a) To what extent did communications from management at my site help set your expectations for the new financial system?**

<b>Category</b>	<b>Total</b>	<b>NCA</b>	<b>VBA</b>
To a very great extent	3	1	2
To a great extent	5	3	2
To a moderate extent	7	4	3
To a small extent	9	4	5
To no extent	2	1	1
No basis to judge	2	1	1
<b>Total</b>	<b>28</b>	<b>14</b>	<b>14</b>

**10b) To what extent did communications from VA Central Office/FMBT program office help set your expectations for the new financial system?**

<b>Category</b>	<b>Total</b>	<b>NCA</b>	<b>VBA</b>
To a very great extent	5	1	4
To a great extent	12	7	5
To a moderate extent	8	6	2
To a small extent	0	0	0
To no extent	1	0	1
No basis to judge	2	0	2
<b>Total</b>	<b>28</b>	<b>14</b>	<b>14</b>

**10c) To what extent did communications from CGI Federal help set your expectations for the new financial system?**

<b>Category</b>	<b>Total</b>	<b>NCA</b>	<b>VBA</b>
To a very great extent	5	1	4
To a great extent	8	4	4
To a moderate extent	2	2	0
To a small extent	3	3	0
To no extent	4	3	1
No basis to judge	6	1	5
<b>Total</b>	<b>28</b>	<b>14</b>	<b>14</b>

**Appendix III: User Feedback on VA's New Financial Management System from Structured Interviews**

**10d) To what extent did training sessions help set your expectations for the new financial system?**

Category	Total	NCA	VBA
To a very great extent	5	1	4
To a great extent	5	2	3
To a moderate extent	8	5	3
To a small extent	6	3	3
To no extent	3	3	0
No basis to judge	1	0	1
<b>Total</b>	<b>28</b>	<b>14</b>	<b>14</b>

**10e) To what extent did business process reengineering deep dive workshops help set your expectations for the new financial system?**

Category	Total	NCA	VBA
To a very great extent	2	0	2
To a great extent	5	2	3
To a moderate extent	6	3	3
To a small extent	1	1	0
To no extent	1	1	0
No basis to judge	13	7	6
<b>Total</b>	<b>28</b>	<b>14</b>	<b>14</b>

**11) On average, about how often have you contacted the help desk to obtain assistance with the new financial system since go-live?**

Category	Total	NCA	VBA
More than 5 times/week	4	2	2
2-5 times/week	5	3	2
Approximately 1 time/week	4	1	3
I have occasionally contacted the help desk but not every week	12	6	6
I have never contacted the help desk for assistance with the new system	3	2	1
<b>Total</b>	<b>28</b>	<b>14</b>	<b>14</b>

**12) In general, how satisfied have you been in obtaining resolution when you have contacted the help desk to obtain assistance with the new financial system?**

Category	Total	NCA	VBA
Very satisfied	4	0	4

**Appendix III: User Feedback on VA's New Financial Management System from Structured Interviews**

<b>Category</b>	<b>Total</b>	<b>NCA</b>	<b>VBA</b>
Satisfied	7	1	6
Neither satisfied nor dissatisfied	6	3	3
Dissatisfied	5	5	0
Very dissatisfied	3	3	0
I have never contacted the help desk for assistance with the new financial system	3	2	1
<b>Total</b>	<b>28</b>	<b>14</b>	<b>14</b>

**13) Do you use reports generated by iFAMS in your position?**

<b>Category</b>	<b>Total</b>	<b>NCA</b>	<b>VBA</b>
Yes	24	13	11
No	4	1	3
<b>Total</b>	<b>28</b>	<b>14</b>	<b>14</b>

**14) How often do you use reports generated by iFAMS?**

<b>Category</b>	<b>Total</b>	<b>NCA</b>	<b>VBA</b>
Almost every day	14	10	4
Several times a week	5	2	3
Approximately once a week	3	1	2
Several times a month	0	0	0
Approximately once a month	1	0	1
Never	0	0	0
Other – if so how often	1	0	1
<b>Total</b>	<b>24</b>	<b>13</b>	<b>11</b>

**15) How would you describe the completeness of reports you receive from the system?**

<b>Category</b>	<b>Total</b>	<b>NCA</b>	<b>VBA</b>
Complete, has all the information I need	6	3	3
Mostly complete, reports have most of the information you need	5	2	3
Partially complete, is missing some information	10	5	5
Mostly incomplete, is missing crucial information	3	3	0
Incomplete, does not have any of the information I need	0	0	0
<b>Total</b>	<b>24</b>	<b>13</b>	<b>11</b>

**16) How would you describe the accuracy of reports you receive from the system?**

**Appendix III: User Feedback on VA's New Financial Management System from Structured Interviews**

<b>Category</b>	<b>Total</b>	<b>NCA</b>	<b>VBA</b>
Completely accurate, all the information presented is correct	5	2	3
Mostly accurate, most of the information presented is correct	10	3	7
Partially accurate, some information is wrong	7	6	1
Mostly inaccurate, crucial parts are wrong	2	2	0
Completely inaccurate, none of the information is correct	0	0	0
<b>Total</b>	<b>24</b>	<b>13</b>	<b>11</b>

**17) How would you describe the overall quality of the reports you receive from the system?**

<b>Category</b>	<b>Total</b>	<b>NCA</b>	<b>VBA</b>
Excellent	5	1	4
Good	8	3	5
Average	5	3	2
Below average	4	4	0
Poor	2	2	0
<b>Total</b>	<b>24</b>	<b>13</b>	<b>11</b>

---

# Appendix IV: Comments from the Department of Veterans Affairs

Appendix IV: Comments from the Department  
of Veterans Affairs



DEPARTMENT OF VETERANS AFFAIRS  
WASHINGTON

March 4, 2022

Ms. Paula M. Rascona  
Director  
Financial Management and Assurance  
U.S. Government Accountability Office  
441 G Street, NW  
Washington, DC 20548

Dear Ms. Rascona:

The Department of Veterans Affairs (VA) has reviewed the Government Accountability Office (GAO) draft report: **VETERANS AFFAIRS FINANCIAL MANAGEMENT SYSTEM: Additional Actions Needed to Help Ensure Success of Future Deployments** (GAO-22-105059).

The enclosure contains the actions to be taken to address the draft report recommendations. VA appreciates the opportunity to comment on your draft report.

Sincerely,

A handwritten signature in black ink, appearing to read "Tanya J. Bradsher".

Tanya J. Bradsher  
Chief of Staff

Enclosure

Appendix IV: Comments from the Department  
of Veterans Affairs



DEPARTMENT OF VETERANS AFFAIRS  
WASHINGTON

March 4, 2022

Ms. Carol C. Harris  
Director  
Information Technology and Cybersecurity  
U.S. Government Accountability Office  
441 G Street, NW  
Washington, DC 20548

Dear Ms. Harris:

The Department of Veterans Affairs (VA) has reviewed the Government Accountability Office (GAO) draft report: **VETERANS AFFAIRS FINANCIAL MANAGEMENT SYSTEM: Additional Actions Needed to Help Ensure Success of Future Deployments** (GAO-22-105059).

The enclosure contains the actions to be taken to address the draft report recommendations. VA appreciates the opportunity to comment on your draft report.

Sincerely,

A handwritten signature in black ink, appearing to read "Tanya J. Bradsher".

Tanya J. Bradsher  
Chief of Staff

Enclosure

Enclosure

Department of Veterans Affairs (VA) Response to  
Government Accountability Office (GAO) Draft Report  
**VA FINANCIAL MANAGEMENT SYSTEM: Additional Actions Needed to Help  
Ensure Success of Future Deployments**  
(GAO-22-105059)

The Financial Management Business Transformation (FMBT) Deputy Assistant  
Secretary (DAS) should:

**Recommendation 1: Establish target values for operational and customer  
experience metrics to allow the program to measure progress over time.**

**VA Response:** Concur: The FMBT program will coordinate with stakeholders for each  
wave to ensure that operational and customer experience metrics will have baselines  
and targets established allowing the program to measure progress over time and  
provide results to stakeholders to support operational improvements.

**Recommendation 2: Report metrics in relation to target values to help ensure  
operational benefits are delivered as intended.**

**VA Response:** Concur: The FMBT program will work with customer stakeholders to  
establish meaningful target values for each metric. Future metric reporting will include  
scored value against target value.

**Recommendation 3: In coordination with appropriate offices within VA, should  
facilitate the increase of workforce skills and competencies through user  
completion of core competency training.**

**VA Response:** Concur: The FMBT program began tracking core competency training  
attendance as part of our Operational Readiness Criteria with established thresholds for  
attendance. If the attendance thresholds for core competency are not met, it is  
escalated to the customer wave sponsor and/or program advisor as well as the  
Executive Sponsor to allow the Administration or Staff Office leadership to communicate  
the importance of attendance in advance of system training. The program will further  
escalate to executive leadership if we see attendance thresholds are not met.

**Recommendation 4: Ensure that the FMBT program's organizational change  
management activities assess the readiness for change by conducting  
organizational change assessments as planned.**

**VA Response:** Concur: The FMBT program will deploy the organizational change  
assessments as planned within the integrated project schedule.

---

**Appendix IV: Comments from the Department  
of Veterans Affairs**

Enclosure

Department of Veterans Affairs (VA) Response to  
Government Accountability Office (GAO) Draft Report  
***VA FINANCIAL MANAGEMENT SYSTEM: Additional Actions Needed to Help  
Ensure Success of Future Deployments***  
(GAO-22-105059)

**Recommendation 5: Ensure that the FMBT program’s organizational change management activities adequately assess the results of change by following through on plans to align customer experience questions with organizational change assessments.**

**VA Response:** Concur: The FMBT program has already revised the operational needs question in the organizational change assessment. The updated question was used in the first organizational change assessment for the Veterans Benefits Administration General Operating Expenses wave.

**Recommendation 6: Include conversion timing risks and issues in its risk issue register and mitigate the risks and issues for future deployments.**

**VA Response:** Concur: The FMBT program has documented the conversion timing as Risk # 487 “Data Conversion Timing.” The program is currently mitigating that risk by ensuring best practices and lessons learned are documented, shared and updated on an ongoing basis.

Department of Veterans Affairs  
March 2022

Page 2 of 2

# Accessible Text for Appendix IV: Comments from the Department of Veterans Affairs

March 4, 2022

Ms. Carol C. Harris  
Director  
Information Technology and Cybersecurity  
U.S. Government Accountability Office  
441 G Street, NW  
Washington, DC 20548

Dear Ms. Harris:

The Department of Veterans Affairs (VA) has reviewed the Government Accountability Office (GAO) draft report: VETERANS AFFAIRS FINANCIAL MANAGEMENT SYSTEM: Additional Actions Needed to Help Ensure Success of Future Deployments (GAO-22-105059).

The enclosure contains the actions to be taken to address the draft report recommendations. VA appreciates the opportunity to comment on your draft report.

Sincerely,

Tanya J. Bradsher  
Chief of Staff

Enclosure

March 4, 2022

Ms. Paula M. Rascona  
Director  
Financial Management and Assurance  
U.S. Government Accountability Office  
441 G Street, NW  
Washington, DC 20548

Dear Ms. Rascona:

The Department of Veterans Affairs (VA) has reviewed the Government Accountability Office (GAO) draft report: VETERANS AFFAIRS FINANCIAL MANAGEMENT SYSTEM: Additional Actions Needed to Help Ensure Success of Future Deployments (GAO-22-105059).

The enclosure contains the actions to be taken to address the draft report recommendations. VA appreciates the opportunity to comment on your draft report.

Sincerely,

Tanya J. Bradsher  
Chief of Staff

Enclosure

The Financial Management Business Transformation (FMBT) Deputy Assistant Secretary (DAS) should:

Recommendation 1: Establish target values for operational and customer experience metrics to allow the program to measure progress over time.

VA Response: Concur: The FMBT program will coordinate with stakeholders for each wave to ensure that operational and customer experience metrics will have baselines and targets established allowing the program to measure progress over time and provide results to stakeholders to support operational improvements.

Recommendation 2: Report metrics in relation to target values to help ensure operational benefits are delivered as intended.

VA Response: Concur: The FMBT program will work with customer stakeholders to establish meaningful target values for each metric. Future metric reporting will include scored value against target value.

Recommendation 3: In coordination with appropriate offices within VA, should facilitate the increase of workforce skills and competencies through user completion of core competency training.

VA Response: Concur: The FMBT program began tracking core competency training attendance as part of our Operational Readiness Criteria with established thresholds for attendance. If the attendance thresholds for core competency are not met, it is escalated to the customer wave sponsor and/or program advisor as well as the

Executive Sponsor to allow the Administration or Staff Office leadership to communicate the importance of attendance in advance of system training. The program will further escalate to executive leadership if we see attendance thresholds are not met.

Recommendation 4: Ensure that the FMBT program's organizational change management activities assess the readiness for change by conducting organizational change assessments as planned.

VA Response: Concur: The FMBT program will deploy the organizational change assessments as planned within the integrated project schedule.

Recommendation 5: Ensure that the FMBT program's organizational change management activities adequately assess the results of change by following through on plans to align customer experience questions with organizational change assessments.

VA Response: Concur: The FMBT program has already revised the operational needs question in the organizational change assessment. The updated question was used in the first organizational change assessment for the Veterans Benefits Administration General Operating Expenses wave.

Recommendation 6: Include conversion timing risks and issues in its risk issue register and mitigate the risks and issues for future deployments.

VA Response: Concur: The FMBT program has documented the conversion timing as Risk # 487 "Data Conversion Timing." The program is currently mitigating that risk by ensuring best practices and lessons learned are documented, shared and updated on an ongoing basis.

Department of Veterans Affairs  
March 2022

---

## Appendix V: GAO Contacts and Staff Acknowledgments

---

### GAO Contacts

Paula M. Rascona, (202) 512-9816 or [rasconap@gao.gov](mailto:rasconap@gao.gov)

Carol C. Harris, (202) 512-4456 or [harriscc@gao.gov](mailto:harriscc@gao.gov)

---

### Staff Acknowledgments

In addition to the contacts named above, Mark Bird (Assistant Director), Michael LaForge (Assistant Director), Olivia Adams, Becca Eyler, Liam Rorison, Lisa Rowland, Jonah Silencieux, Jennifer Stavros-Turner, Anne Thomas, Walter Vance, Steve Wright, and Merry Woo made key contributions to this report.

---

---

## GAO's Mission

The Government Accountability Office, the audit, evaluation, and investigative arm of Congress, exists to support Congress in meeting its constitutional responsibilities and to help improve the performance and accountability of the federal government for the American people. GAO examines the use of public funds; evaluates federal programs and policies; and provides analyses, recommendations, and other assistance to help Congress make informed oversight, policy, and funding decisions. GAO's commitment to good government is reflected in its core values of accountability, integrity, and reliability.

---

## Obtaining Copies of GAO Reports and Testimony

The fastest and easiest way to obtain copies of GAO documents at no cost is through our website. Each weekday afternoon, GAO posts on its [website](#) newly released reports, testimony, and correspondence. You can also [subscribe](#) to GAO's email updates to receive notification of newly posted products.

---

## Order by Phone

The price of each GAO publication reflects GAO's actual cost of production and distribution and depends on the number of pages in the publication and whether the publication is printed in color or black and white. Pricing and ordering information is posted on GAO's website, <https://www.gao.gov/ordering.htm>.

Place orders by calling (202) 512-6000, toll free (866) 801-7077, or TDD (202) 512-2537.

Orders may be paid for using American Express, Discover Card, MasterCard, Visa, check, or money order. Call for additional information.

---

## Connect with GAO

Connect with GAO on [Facebook](#), [Flickr](#), [Twitter](#), and [YouTube](#).  
Subscribe to our [RSS Feeds](#) or [Email Updates](#). Listen to our [Podcasts](#).  
Visit GAO on the web at <https://www.gao.gov>.

---

## To Report Fraud, Waste, and Abuse in Federal Programs

Contact FraudNet:

Website: <https://www.gao.gov/about/what-gao-does/fraudnet>

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

---

---

## Congressional Relations

A. Nicole Clowers, Managing Director, [ClowersA@gao.gov](mailto:ClowersA@gao.gov), (202) 512-4400, U.S. Government Accountability Office, 441 G Street NW, Room 7125, Washington, DC 20548

---

## Public Affairs

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

---

## Strategic Planning and External Liaison

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



**Please Print on Recycled Paper.**