Office of the Chief Financial Officer, Washington, DC

New Core Project: Shared Service Implementation Failed To Meet Expectations

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Information Systems Audit Division
Washington, DC

Audit Report Number: 2017-DP-0001
February 01, 2017

February 1, 2017

To: Janet Golrick, Acting Deputy Secretary, SD

From: Randy W. McGinnis, Assistant Inspector General for Audit, GA

Subject: HUD's Transition to a Federal Shared Service Provider Failed To Meet Expectations

Attached is the U.S. Department of Housing and Urban Development (HUD), Office of Inspector General's (OIG) final results of our audit of HUD's computing environment as part of the internal control assessments required for the fiscal year 2016 financial statement audit under the Chief Financial Officer's Act of 1990.

HUD Handbook 2000.06, REV-4, sets specific timeframes for management decisions on recommended corrective actions. For each recommendation without a management decision, please respond and provide status reports in accordance with the HUD Handbook. Please furnish us copies of any correspondence or directives issued because of the audit.

The Inspector General Act, Title 5 United States Code, section 8M, requires that OIG post its publicly available reports on the OIG Web site. Accordingly, this report will be posted at http://www.hudoig.gov.

If you have any questions or comments about this report, please do not hesitate to call me at 202-402-8107.

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HUD's Transition to a Federal Shared Service Provider Failed To Meet Expectations

Highlights

What We Audited and Why

We audited the U.S. Department of Housing and Urban Development's (HUD) computing environment as part of the internal control assessments required for the fiscal year 2016 financial statement audit under the Chief Financial Officer's Act of 1990. Our objective was to assess the effectiveness of the controls over the New Core Interface Solution (NCIS) and PRISM™ and the impact of the implementation of release 3 of phase 1 of the New Core Project on the preparation of HUD's financial statements. This audit is the fourth in a series of audits on the New Core Project implementation.

What We Found

Since 2003, HUD had spent more than $131 million on two projects to replace its core financial system. The latest project, the New Core Project, provided for a transition to a Federal shared service provider. HUD ended the project and its transition to the Federal shared service provider before completion in April 2016 after spending $96.3 million. Although the service provider maintained the system of record for HUD fiscal year 2016 funds, the transition did not significantly improve the handling of HUD's financial management transactions. Weaknesses identified with the controls over NCIS and PRISM™ contributed to this issue. This condition occurred because of funding shortfalls as well as HUD's decisions to (1) separate phase 1 of the project into smaller releases, (2) move forward with the implementation despite having unresolved issues, and (3) terminate the project before its completion. The resulting system issues and limitations inhibited HUD's ability to produce reliable, useful, and timely financial information. A year after the transition, HUD had inaccurate data resulting from the conversions and continued to execute 97 percent of programmatic transactions in its legacy applications. In addition, HUD did not decommission all of the applications it wanted to, including its core financial system, nor did it achieve the planned cost savings.

What We Recommend

We recommend that HUD complete the actions necessary to address the procurement data conversion errors, classify NCIS as mission critical, and include it in HUD's disaster recovery exercises. In addition, we recommend that the New Core staff from the Office of the Chief Financial Officer work with the Office of the Chief Information Officer on the projects HUD created to address functionality that was not completed in the New Core implementation.

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Background and Objective

The U.S. Department of Housing and Urban Development (HUD) has been modernizing its legacy financial management system since fiscal year 2003. The previous project, the HUD Integrated Financial Management Improvement Project (HIFMIP), was intended to replace two applications HUD used for core processing. In March 2012, however, HUD stopped work on the project and later canceled it after spending more than $35 million.

The New Core Project was initiated in the fall of 2012 to implement a new core financial system for HUD. On March 25, 2013, the Office of Management and Budget (OMB) issued memorandum M-13-08, which mandated the use of Federal shared service providers (FSSP) to modernize core accounting or mixed systems. The New Core Project supported the integration activities associated with the migration of HUD's core accounting and administrative system functions from its legacy systems to an FSSP, the U.S. Department of the Treasury, Bureau of Fiscal Services' Administrative Resource Center (ARC).

HUD signed an interagency agreement on July 30, 2013, to migrate its financial transactions and systems to ARC. Specifically, ARC would support (1) funds management, (2) purchasing, (3) accounts payable, (4) accounts receivable, (5) cash management, (6) cost accounting, (7) the core financial system, (8) the general ledger, (9) financial reporting, (10) grants management, and (11) loans management. HUD planned to use a phased approach to modernize all of its financial systems and processes. In March 2014, HUD revised its initial implementation plan to multiple-phased releases.

The project included the following four phases:

- Phase 1 addressed core financial and administrative functions and was separated into four different releases. Each release defined a particular function that would be transferred to the U.S. Department of the Treasury's shared services platform as follows:

    - Release 1 transferred the travel and relocation functions to Treasury. It was implemented on October 1, 2014.
    - Release 2 transferred time and attendance to Treasury. It was implemented on February 8, 2015.
    - Release 3 migrated the core financial services owned by the Office of the Chief Financial Officer (OCFO), to include the migration of accounting system services associated with budget execution, accounting, finance, data warehouse reporting, and an interface solution. It was implemented on October 1, 2015.
    - Release 4 details were never finalized. Plans for the release stated that it would address functionality shifted from the release 3 implementation and HUD's grant and loan accounting systems. However, a date for implementation was not scheduled.

- Phase 2 would address managerial cost accounting, budget formulation, and a fixed assets system.
- Phases 3 and 4 would address the consolidation of the Federal Housing Administration (FHA) and Government National Mortgage Association (Ginnie Mae) as well as the migration of the functionality of Line of Credit Control System (LOCCS).

Plans for phases 2 through 4 of the project were never finalized, and implementation dates were not scheduled. Through its New Core Project, HUD was the first cabinet-level agency to transition some of its core accounting functions to an FSSP.

With implementation of phase 1, release 3, the functionality of HUD's New Core Interface Solution (NCIS)[1] was modified to transfer budget information to HUD legacy systems from Oracle Federal Financials (Oracle Financials)[2] used by ARC. It would also transfer programmatic financial transactions from legacy systems to Oracle Financials, translating between the HUD Centralized Accounting Program System (HUDCAPS) account code structure and the Oracle Financials accounting flex field[3] in both instances. Release 3 also transitioned procurement systems from HUD's Integrated Acquisition Management System (HIAMS)[4] to ARC's PRISM™.[5]

This audit was conducted as a component of the internal control assessments required for the fiscal year 2016 financial statement audit under the Chief Financial Officer's Act of 1990. Our objective was to assess the effectiveness of the controls over NCIS and PRISM™ and the impact of the implementation of phase 1, release 3, of the New Core Project on the preparation of HUD's financial statements. This audit report is the fourth in a series of audits completed on the New Core Project implementation.

[1] NCIS is a custom-developed system owned by HUD and hosted by Oracle Managed Cloud Services. NCIS performs the extract, transform, and load functions as well as a variety of error-processing, reconciliation, and interface file management functions to support the interface of HUD systems with ARC's systems.
[2] Oracle Federal Financials is a common term used to describe a collection of Oracle E-Business Suite modules and functionality used by U.S. Federal Government agencies.
[3] The accounting flex field is a feature within Oracle applications that provides a flexible way for the applications to represent objects such as accounting codes. The accounting flex field aligns to the Common Government-Wide Accounting Classification structure. This structure represents an accounting classification, which provides a consistent means for classifying financial events that enables the summarization and reporting of information in a meaningful way.
[4] HIAMS is HUD's former procurement application. It was used by HUD's Office of the Chief Procurement Officer and HUD's regional program offices to store and manage HUD acquisition-related data from acquisition planning through contract completion.
[5] PRISM™ is a Web-based application that provides Federal acquisition communities with the tools needed to support the complete acquisition management life cycle, from initial planning and requisitioning through source selection, award, post award management, and closeout.

Results of Audit

Finding 1: New Core Implementation Failed To Meet Expectations

HUD's transition to an FSSP did not significantly improve the handling of its financial management transactions. Weaknesses identified with the controls over NCIS and PRISM™ contributed to this issue. A year after the transition, HUD had inaccurate data resulting from the conversions and continued to execute programmatic transactions using its legacy applications. The transition increased the number of batch processes required to record programmatic financial transactions and introduced manual processes and delays for budget and procurement transactions. In addition, the interface program that allowed for and translated the financial transactions between HUD and ARC was not covered under HUD's disaster recovery plan. These conditions occurred because of funding shortfalls as well as HUD's decisions to (1) separate phase 1 of the project into smaller releases, (2) move forward with the implementation despite unresolved issues, and (3) terminate the project before its completion. These system issues and limitations inhibited HUD's ability to produce reliable, useful, and timely financial information. While HUD considered its New Core Project implementation successful, it acknowledged that all of the originally planned capabilities were not deployed. HUD needs to pursue new process improvement projects to address the functionalities that were not achieved with phase 1 of New Core, which will require additional time and funding. HUD will also need to pursue process improvements for the functionality planned in the future phases of the project. In April 2016, HUD ended the New Core Project and the transition to an FSSP after spending $96.3 million; however, the transition did not allow HUD to decommission all of the applications it wanted to or achieve the planned cost savings.

HUD Had Inaccurate Data Resulting From the Conversions to Oracle Financials and PRISM™

HUD's conversion of data from its legacy applications to the FSSP was problematic. Since the transition to phase 1, release 3, on October 1, 2015, we have performed two audits that assessed the data converted to ARC applications. Our audit work regarding data transferred between HUDCAPS[6] and Oracle Financials[7] (the former and current official financial system of record) found unresolved data conversion errors estimated at an absolute value[8] of more than **$9 billion** as of June 2016. This condition occurred because HUD decided to proceed with the implementation of release 3 without fixing errors, identified through testing, to meet the October 1, 2015, implementation date. The inaccurate data in Oracle Financials resulted in inaccurate

[6] HUDCAPS is HUD's former core accounting application. It captures, controls, and summarizes the results of the accounting processes for HUD's program funds. Before October 1, 2015, it was HUD's general ledger and the system of financial records.
[7] Audit report 2016-DP-0004, issued September 20, 2016
[8] The absolute value of a real number is the value without regard to its sign.

data within HUD's funds management reports. In June 2016, differences between HUDCAPS and Oracle Financials were estimated at an absolute value of **$4.5 billion**.

The conversion of procurement data between HIAMS and ARC's PRISM™ was also problematic. Specifically, (1) some HIAMS contracts did not transfer to PRISM™, (2) some contracts did not transfer properly, and (3) some legacy HIAMS data for open contracts were not fully available in PRISM™ at conversion. In addition, some awards that were split-funded[9] had to be reissued before requisitions could be processed. This condition occurred because HUD did not address potential data transition issues identified during testing. As a result, HUD was required to manually enter transactions into PRISM™ to correct the issues, and contracting actions were delayed. Through July 2016, HUD had made manual adjustments to 205 contracts totaling more than $59 million. An additional 20 contracts valued at $38 million still required correction.

To adjust transactional data in its general ledger, HUD used 2,868 journal vouchers totaling **$7.8 trillion** during the fiscal year. Of this amount, **$5.8 trillion** was used to adjust transactional data and to correct data conversion issues that arose from differences in processing requirements between HUDCAPS and Oracle Financials. These journal vouchers manually changed transactional data either by (1) adjusting one or more segments of the accounting flex field[10] or (2) closing accounting flex fields manually to maintain vendor-level detail. HUD was required to close accounting flex fields manually because ARC's yearend close process did not roll forward vendor-level information that was needed to populate HUD's custom trial balances. Therefore, ARC had to manually close the accounting flex fields that required vendor-level detail.

In addition to the adjustments needed for data conversion, HUD adjusted transactional data totaling **$112.6** billion. See the following table for details.

[9] Split-funded awards are contracts between two operating units within HUD. For reporting purposes, HUD is divided into four distinct Oracle operating units in the Oracle Financial System: Federal Housing Administration (FHA), Government National Mortgage Association (GNMA), HUG (HUD Office of Inspector General), and HUD (all other HUD program offices and business units).

[10] The accounting flex field represents the accounting strip or line of accounting and must be present on every transaction in Oracle Financials.

Reason for adjustment	Amount
To correct differences identified between its general ledger and its subledgers	$ 16.5 billion
To record loan balances, loan guarantee limits, and subsidy transfers that should have been recorded in prior years and to resolve discrepancies between HUD's subsidiary records and general ledger	17.3 billion
To adjust its budgetary balances to agree with Treasury's form SF-132[11]	2.7 billion
To adjust its cash balances to agree with Treasury	1.2 billion
To account for daily loan activity	4.7 billion
To record grant accruals and eliminations and other items that will always require manual adjustment	70.2 billion
Total	112.6 billion

There were also adjustments totaling **$1.7 trillion** made as part of Oracle's normal closing process. This extensive use of journal vouchers complicated the financial reporting process, burdened staff, and increased the risk of error.

HUD Continued To Execute Programmatic Transactions in Its Legacy Systems

For fiscal year 2015, 97 percent of HUD's budget was allocated to its program areas, such as public and Indian housing and community planning and development. Following the implementation of phase 1, release 3, these funds continued to be controlled and processed within legacy HUD applications. Specifically, HUD's

- Payment processing for grant and loan activities continued to be controlled within LOCCS,[12]
- Financial transactions related to payments made in LOCCS continued to interface via the Program Accounting System[13] (PAS) to be recorded in HUDCAPS, and
- Public and Indian housing Section 8 programmatic transactions continued to be processed in HUDCAPS.

[11] The SF-132 is the apportionment from Treasury, which shows budgetary resources approved for use by the agency

[12] LOCCS supports OCFO and all HUD program offices in coordinating and controlling grant, loan, and subsidy disbursements. The system is OCFO's primary vehicle for cash management while monitoring disbursements according to the individual control requirements used by HUD program offices to ensure program compliance. LOCCS is both a payment control tool and a HUD post award financial grants management system. LOCCS is also the link that connects HUD's program management information systems to its program accounting data.

[13] PAS is an integrated subsidiary ledger for HUD's grant, subsidy, and loan programs. PAS maintains accounting records based on receipt of funding authorizations from HUDCAPS, which generates transaction activity at different levels.

HUD's legacy applications continue to be used because HUD decided to use NCIS to transfer data between HUDCAPS and Oracle Financials. This decision was made to leverage the Oracle Financials standard prebuilt interfaces and reduce the cost and overall effort of interface development. The original plans for the project were to have each HUD legacy system (for example, LOCCS) interface directly with Oracle Financials. Implementation of the original plan would have required modification to each interfacing system to accommodate the new Oracle Financials requirements and would have prevented HUD from meeting the established project timelines. However, using NCIS increased the number of processes that the data traveled through to be recorded in the general ledger, impacting the efficiency and effectiveness of HUD's operations.

Since 1991, we have reported on system limitations and deficiencies in HUD's legacy financial management systems as well as its lack of an integrated financial management system. In fiscal year 2015, the issue was determined to be a material weakness. Program offices compensated for the system limitations by using manual processes to meet financial management needs. However, these system issues and limitations inhibited HUD's ability to produce reliable, useful, and timely financial information. Complete and reliable financial information is critical to HUD's ability to accurately report on the results of its operations to both internal and external stakeholders. The implementation of release 3 did not alleviate these issues.

The FSSP Transition Increased the Number of Batch Processes Required To Record Programmatic Financial Transactions for HUD

The continued use of HUD's legacy applications in the transition to the FSSP increased the number of batch processes[14] used to control funds in HUD's budget. **In the New Core environment, formerly automated processes became manual ones.** Budget data for programmatic funds were established in Oracle Financials by ARC staff based on data received via a manual budget template process. Once entered into Oracle Financials (the system of record for budget), the programmatic budget lines were transmitted to HUD legacy systems through the NCIS nightly batches to update legacy system budgets and allow programmatic transactions to be processed. HUD's legacy interfaces were not modified during the New Core phase 1, release 3, implementation. These processes continued to operate as they did before the New Core implementation. Programmatic transactions recorded in HUD legacy systems interface via nightly batches to HUDCAPS. Once in HUDCAPS, the transactions were summarized into general ledger entries and then transmitted to Oracle Financials through the NCIS nightly batches. The transactions were posted to Oracle Financials' general ledger, and then budget levels, commitments, and obligations were updated. **In fiscal year 2013, before the implementation of phase 1, release 1, HUD used nine applications to process travel and relocation, time and attendance, accounting, budgeting, finance, reporting, and procurement functions. In fiscal year 2016, that number increased to 14.**

[14] Batch processing is the processing of transactions in a group or batch. No user interaction is required once batch processing is underway. This differentiates batch processing from transaction processing, which involves processing transactions one at a time and requires user interaction. Batch jobs can be stored during working hours and then executed during the evening or whenever the computer is idle.

These additional data transfers made it difficult to trace financial transactions in Oracle Financials back to HUD's legacy applications. To support the balances of the consolidated general ledger accounts in Oracle Financials 'standard trial balance detail report, HUD condensed multiple HUDCAPS data fields into a single unformatted field. Multiple HUDCAPS data fields were needed to identify the specific accounting codes, references to grants or contracts, and the source documents used by approving officials for each balance. For this year's financial audit, HUD developed another trial balance report generated from NCIS, which presented the HUDCAPS data formatted for easier use. However, a review of that report determined that it was incomplete and excluded approximately **$1.7 billion** in transactions from salaries and administrative funds.

The additional transfers of HUD's data between applications also increased the number of opportunities for data to be modified between HUD's legacy applications-subledgers and the general ledger maintained by Oracle. Subledger reconciliations provide assurance regarding the completeness and accuracy of records. They support the amounts in the financial statements by ensuring that the controlling accounts in the general ledger equal subledger balances. As a part of the shared service agreement, ARC performed monthly reconciliations between the Oracle Financials' general ledger and the integrated subledgers it had maintained since the implementation. However, ARC had been unable to reconcile the HUD balances converted to Oracle Financials on October 1, 2015, and the balances from transactions in HUD's legacy applications since that date because ARC did not have access to the data in the legacy applications. To correct that deficiency, HUD asked ARC to perform the reconciliations. ARC began reconciling HUD legacy subledger data to the general ledger with month end numbers in March 2016. As of September 2016, ARC was still working with HUD to identify all of the subledgers required to reconcile the data. Meanwhile, for the reconciliations that ARC performed through September 2016, differences totaling **$29.38 billion** were identified. HUD created a team to resolve these differences.

Manual Processes and Delays Were Introduced for Budget and Procurement Transactions

With the implementation of phase 1, release 3, most transactions managed by ARC used a manual process. HUD users authorized to process transactions for a given fund or program office completed a specific Excel template and submitted it to ARC. ARC reviewed the completed template for completeness and accuracy and then uploaded the data into Oracle. Following the successful processing of an ARC template, the ARC employee responded to the HUD submitter with a notification of successful processing. For example, the recording of the budget in Oracle Financials was handled using this process. Before the implementation, HUD staff manually entered the data into HUDCAPS. This change in the process introduced a delay of 48 hours before funds were available for program spending and reflected in financial reporting tools that provided HUD officials with the status of available funds. Delays were also introduced because neither HUD nor ARC could make necessary adjustments or corrections to data without significant collaboration and obtaining several layers of approval. For example, the resolution of NCIS processing errors often required coordination among the staff that managed HUDCAPS, NCIS, and Oracle Financials, as well as getting approval from HUD's accounting, budget, or program budget officers. We also noted that ARC staff used a delegation of authority matrix,

maintained on ARC's customer page to determine whether templates received to enter into Oracle Financials were obtained from personnel authorized to submit the information. ARC staff manually reviewed this document before processing the transactions received from HUD staff and rejected any transaction not signed by employees listed in the matrix. **This manual process replaced the automated role-based system authentication controls within the HUDCAPS application.**

During requirements sessions for the transition to ARC, it was determined that there was no automated solution for processing split-funded contracts in ARC's systems. With the transition to ARC's PRISM™, HUD implemented a system migration that it knew would not provide the same functionality as the HIAMS procurement system. HIAMS, also a version of the commercial-off-the-shelf product PRISM™, was implemented by HUD in October 2011 at a cost of more than $17 million. HIAMS could handle split-funded contracts automatically through the application. **With the transfer to ARC's version of PRISM™, the processing of these transactions became manual, increasing the complexity for HUD's program offices and procurement community.** This condition occurred because within Oracle Financials, HUD is divided into four distinct Oracle operating units for reporting purposes. For PRISM™ transactions to properly record in ARC's Oracle Financials, they must follow those specific operating units. To allow procurements that receive funding from two or more operating units to be recorded in ARC's PRISM™, HUD was required to implement a manual work-around process. To do this, HUD created intra-agency agreements between the operating units with reimbursement agreements to allow the transaction to successfully post to the financial system. The information regarding these contracts was manually entered into Oracle Financials. During fiscal year 2016, HUD had contracts with more than one operating unit valued at more than $6 billion. Additional monitoring of these contracts was required to determine when adjustments needed to be made. Invoices from the vendors for these contracts also required the approval of staff from both the primary and secondary operating units. In addition, an internal transfer form was required to process the transfer of funds between operating units for payment.

HUD's Interface Application Between HUD and ARC Could Not Be Recovered in the Event of a Disaster

HUD did not ensure that NCIS, its interface application that transferred data between HUD and ARC, could be recovered in the event of a disaster. Specifically, although NCIS used a secure file transfer protocol (SFTP)[15] server in the HUD production environment, an SFTP server was not available for the application to use at the fail-over site. In addition, the contingency plan developed by OCFO could not be tested, and no procedures or compensating controls had been established within the plan to perform the processing. This condition occurred because of gaps in HUD's policies established by the Office of the Chief Information Officer (OCIO). Additionally, OCFO and OCIO did not effectively collaborate and follow HUD's policies.

[15] An SFTP server is a server running secure file transfer protocol. SFTP is a secure version of file transfer protocol, which facilitates data access and data transfer over a secure shell data stream.

OCIO did not make disaster recovery provisions for NCIS because it was not designated as a mission-critical system in HUD's Inventory of Automated Systems (IAS). OCIO's internal standard operating procedure specified that only applications identified as mission critical in IAS were to be included in the HUD's Disaster Recovery Plan for Service Continuity and Availability Management (DRPSCAM). However, this was not specified in the system owners' instructions for determining mission criticality. OCIO's instructions for determining mission criticality only required the system owner to complete a HUD mission-critical questionnaire and include it with its system security planning package. The instructions did not tell owners of mission-critical systems that the mission-critical designation must be in IAS and did not specify who was responsible for adding this information to IAS. Further, there was no requirement for OCIO to review and approve the mission-critical designation.

OCFO did not initially complete the mission-critical questionnaire and include it with the other security documents. However, OCFO officials did identify the application as mission critical within its system documentation. OCFO also requested that the OCIO officially designate NCIS as a mission-critical system so that it could be included in HUD's DRPSCAM but was informed by OCIO staff that it could not be labeled as mission critical because it was hosted outside HUD's infrastructure. In determining whether a system should be included in HUD's disaster recovery platform, OCIO's procedures did not require an assessment of systems that reside outside HUD's infrastructure to determine whether OCIO had responsibilities related to services not specifically handled by the contractor. In this case, ARC provided a service to HUD; however, the connectivity between HUD and ARC required an SFTP server that resided within HUD's infrastructure.

OCIO did not make disaster recovery provisions for the interface program at the fail-over facility and did not include such provisions in the initial planning for the new disaster recovery data center that it transferred to in fiscal year 2016 because the interface program was not designated as a mission-critical system in HUD's IAS. **Without a fail-over SFTP server configured to function for NCIS, there would be no connectivity for transferring financial data between HUD and ARC, effectively shutting down HUD operations.** This weakness could result in antideficiency violations. HUD was migrating to a two data center model. When the migration is complete, SFTP servers will be available at each data center, and capabilities will be active at all times within each data center. However, a functional disaster recovery test of SFTP capabilities for NCIS was not part of the initial data center transition. The current target date from OCIO to test this capability is the fourth quarter of fiscal year 2017.

HUD Experienced Funding Shortfalls With the Implementation of the New Core Project

Funding delays and cuts impacted the implementation of the New Core Project. Money appropriated in fiscal year 2014 for the project was not fully available because HUD did not submit an expenditure plan to the appropriations committee and the Comptroller General as required. HUD received only about $4.5 million of the $10 million of the fiscal year 2015 funds budgeted for the project. Congressional cuts to fiscal year 2015-16 funding also impacted the project because they resulted in the elimination of all modernization and enhancement funding, including the $15.9 million budgeted for the New Core Project. A significant amount of the operations and maintenance funding requested for fiscal year 2015 was also eliminated, resulting

in the $16.6 million requested for the New Core Project being transferred to the salaries and expenses budget. As a result, the New Core Project implementation was short $18 million in fiscal year 2015, which was necessary to cover contracts and pending activity costs through the implementation of release 3. As a result, HUD adjusted the scope of the project to obtain the funding necessary to complete the implementation through release 3.

Decisions HUD Made Resulted in an Incomplete Transition to the FSSP

Throughout the transition to the FSSP, HUD made multiple decisions related to the project. We determined that HUD's decisions (1) regarding how phase 1 of the project was separated into smaller releases and (2) to move forward with the implementation despite unresolved issues weakened internal controls and the efficiency and effectiveness of its operations. Following the implementation of release 3, HUD's Deputy Secretary decided that HUD would continue to use ARC's systems and services for the capabilities that had been delivered but would not transition to shared services as a means for achieving the remaining New Core capabilities. In April of 2016, HUD ended the New Core Project with the closeout of the release 3 implementation. This decision left the transition incomplete.

In HUD's assessment of the release 3 implementation, dated February 2016, it conducted interviews with stakeholders to identify successes and challenges related to the release. HUD identified a number of challenges that impacted the project, many of which we identified during our audit work. HUD reported that it (1) lacked resources with appropriate skill sets to manage and triage the volume of finance and procurement inquiries; (2) condensed the schedule for mapping business processes, which then conflicted with requirements sessions, impacting subject-matter experts' ability to participate in sessions and make informed decisions; (3) developed "mock" data to execute data conversion testing because it did not include all of the data types needed for testing instead of using quality data to validate both system functionality and reports data; (4) did not establish success criteria for the quality of converted data for each conversion cycle, so there were no data metrics to track; and (5) established insufficient testing timeframe windows for fixing and retesting defects due to a lack of understanding of testing efforts.

HUD's assessment also identified why so many issues were encountered. HUD reported that (1) communications and information provided to leadership did not successfully filter down to middle management and staff in all program areas, (2) coordination and decision making across HUD program areas (OCIO, the Office of the Chief Procurement Officer (OCPO), OCFO) proved to be difficult since roles and expectations were not formally established, (3) no clear guiding principles were agreed upon to provide clarity in making decisions (for example, standardization versus customization), and (4) there was limited focus on activities around designing the retained organization as part of implementation scope. HUD also reported that due to several leadership transitions at the initiation of the project, there was a lack of strategic direction and consensus around decision making. We noted that HUD relied heavily on contractors for the transition to the FSSP. Less than 8 months before the scheduled implementation date, 25 percent of the identified positions for the implementation were vacant. An additional 16 percent of the positions were held by contractors. We also noted that the release 3 project manager position was filled by an OCFO reimbursable detail from Treasury. As part of HUD's assessment process, HUD developed recommendations that it believed should

be taken into account for future shared services and information technology (IT) transformation efforts.

Full implementation of the New Core Project consisted of four phases, with phase 1 separated into four separate releases. Releases 1 and 2 were implemented on October 1, 2014, and February 8, 2015, respectively. Release 3 was initially planned to migrate the accounting system services associated with budget execution, accounting, finance, data warehouse reporting, and an interface solution. Release 3 was partially implemented on October 1, 2015. The initial plans for release 4 included (1) transferring the grant and loan accounting processing supported by PAS through Oracle Financials subledgers; (2) developing an automated interface to HUD's Single Family Acquired Asset Management System (SAMS) (accommodated by a data extract and load in release 3); (3) completing any remaining upgrades to PRISM™ functionality not accommodated in release 3; and (4) replacing the functionality of HUDCAPS, PAS, and Financial DataMart as well as integrating it with the Next Generation Management System[16] to enable the decommissioning of HUDCAPS. However, release 4 and later phases of the project were canceled. This condition occurred because in HUD's decision on how to separate phase 1 of the project into smaller releases, it postponed all of the complicated and difficult portions of the project to releases 3 and 4. In addition, HUD continued to move forward with the project despite unresolved issues, such as how the functionality related to HUD's grant and loan programs would be transitioned.

HUD Initiated Projects To Address Some of the Functionality Planned in Phase 1 of New Core

During fiscal year 2015, HUD conducted assessments to decommission HUDCAPS, create an Enterprise Data Warehouse, and develop a plan to transition its grant and loan portfolios. Each of these functionalities was originally planned to be part of the New Core Project. HUD initiated projects to move forward with the decommissioning of HUDCAPS and to create an Enterprise Data Warehouse but not to transition its grant and loan portfolios. These projects will require additional time and funding to complete.

In May 2016, HUD initiated the project to decommission HUDCAPS. The project was based on the strategy developed in fiscal year 2015 when HUD performed a review of its business transformation and IT modernization. HUD's vision for this project was to modernize select HUD business systems into enterprise solutions, while addressing audit findings and emerging (regulatory) requirements as systems were modernized. Overall, the vision was to

- Provide program offices with the tools needed to successfully execute their objectives.
- Modernize selected HUD business systems into enterprise solutions.

[16] This is no longer the name of the planned application. The project to replace the programmatic functionality in HUDCAPS was under development.

- Migrate HUDCAPS and necessary financial systems to a new enterprise solution in an orderly manner, while maintaining financial integrity and "doing no harm" to the HUD mission.
- Reduce IT spending for operations and maintenance by migrating financial and programmatic management functions to common platforms using modern technologies, such as cloud-based systems.
- Capitalize on opportunities to digitize existing and manual processes, while providing improved functionality and efficiencies.
- Address audit findings and emerging (regulatory) requirements and anticipate policy and program changes.

The vision statement for this project had the same objectives as for the New Core Project. Details of the plan to decommission HUDCAPS required that all processing of program transactions currently completed within HUDCAPS be moved to another application. Funding was provided to this project in fiscal year 2015. The development of this solution would occur at the same time as the development of an enterprise solution to replace the functionality of PAS and NCIS as well as the development of an Enterprise Data Warehouse.

To avoid creating multiple data warehouses and data stores, OCIO removed the data warehouse component from the New Core Project in the second quarter of fiscal year 2015 and added it to the HUD-wide Enterprise Data Warehouse project. The plan for the project was to begin a multiyear program to develop an enterprise data management strategy, prototype appropriate technologies, and implement the foundation of a future state Enterprise Data Warehouse. The program was focused on two main initiatives: New Core-Financial Data Mart and Single Family Housing. As of June 2016, the planned start date for the project was September 1, 2016, with a planned end date of September 30, 2017. Initial funding for the project was to support architecture development, implementation of the infrastructure, and onboarding of data from the core financial system.

HUD planned to pursue new process improvement projects to address some of the capabilities not implemented under New Core. These initiatives were in the planning and evaluation stage as of July 2016. In September 2015, the results of a contractor assessment regarding the transition of HUD's grant and loan portfolio were issued. The assessment determined that the following functions needed to be included in the scope of the project:

- Budget formulation,
- Direct loans,
- Financial management,
- Grants (further defined as competitive grants, formula grants, and subsidies),
- Guaranteed loans, and
- Insurance.

As part of the process, an information request was distributed in July 2015 to potential grants shared service providers to confirm current and planned grants management shared service offerings at the function and subfunction level, as well as to gather information on the

organization providing the grants management solution. A vision and strategy were created as a result of this assessment. However, to date, HUD had not made plans to move forward with this portion of the now-ended New Core Project.

HUD Will Also Need To Pursue Process Improvements for the Functionality Planned in the Future Phases of the New Core Project

HUD never finalized the plans for the additional planned phases of the project. In July 2016, HUD reported the status of the planned functionalities for the New Core Project that were not implemented through the phase 1, release 3, implementation. Phase 2 of the project included plans to modernize the financial applications used by the Federal Housing Administration and Government National Mortgage Association. HUD stated that it had reevaluated the need for modernization efforts for the Federal Housing Administration and Government National Mortgage Association and concluded that the current applications met financial system needs and modernization was not required.

Phase 2 of the project was also supposed to include improvements to controls over budget formulation, managerial cost accounting, and property management. Improvements for budget formulation were intended to support the budget formulation process, budget consolidation, and submissions to the Office of Management and Budget. HUD did not identify any improvements in this area as a result of the New Core implementation.

In fiscal year 2006, the U.S. Government Accountability Office reported[17] that HUD's financial systems did not have the functionality to provide managerial cost accounting across its programs and activities. It reported that HUD lacked an effective cost accounting system that was capable of tracking and reporting the costs of HUD's programs in a timely manner to assist in managing its daily operations. This issue resulted in a lack of reliable and comprehensive managerial cost information on HUD's activities and outputs and made HUD unable to produce reliable, cost-based performance information. Controls over managerial cost accounting would allow HUD to track project costs, plan resource allocations, forecast payroll expenditures, and link results to performance. Improvements planned in property management would have allowed HUD to account for costs associated with equipment, property, and software, including automated asset depreciation. With the implementation of phase 1, release 3, HUD stated that it used cost project codes, primarily in OCIO, in Oracle Financials to account for capital and noncapital project spending. HUD believed that this change partially addressed the needs identified for managerial cost accounting. There were no plans to fully implement this system capability as of fiscal year 2016.

Phase 2 plans for property management improvements would have implemented new controls over the accounting for costs associated with equipment, property, and software, including automated asset depreciation. With the implementation of phase 1, release 3, HUD stated that it used cost project codes in Oracle Financials to account for capital and noncapital project

[17] GAO-06-1002R, Managerial Cost Accounting Practices, dated September 21, 2006

spending, primarily in OCIO. Audit work performed for the fiscal year 2016 financial statement audit found that HUD's controls over (1) accounting for internal use software and commercial-off-the-shelf software licenses; (2) accounting for small and large acquisitions of furniture and equipment; (3) safeguarding property and equipment against waste, loss, unauthorized use, or misappropriation; and (4) accounting for leasehold improvements were not effective. HUD's capitalized cost of internal use software and commercial-off-the-shelf licenses was not supported by an adequately detailed subsidiary ledger. A list of internal use software projects with an estimated cost of $255 million did not have adequate support for the underlying transactions.

Additionally, $8 million in estimated costs for the development and implementation of the NCIS software was not included. Lastly, HUD had not analyzed its inventory of commercial-off-the-shelf software licenses to determine the capitalized cost. HUD's subsidiary ledger for property, plant, and equipment was inadequate. Our audit work identified $1.5 million in HUD's property, plant, and equipment related to furniture and equipment that could not be audited because the subsidiary ledger was unreliable and incomplete. In addition, we found at least $5 million in furniture and equipment purchases that had been misclassified as expenses and excluded from the property, plant, and equipment subsidiary records since 2014. Finally, audit work identified unrecorded leasehold improvements. Remodeling projects totaling at least $15.5 million to renovate the HUD headquarters cafeteria, lobby, and auditorium were not properly accounted for. In addition, $46 million in energy-saving improvements occurring in 2011 was not capitalized, including the $46 million liability incurred to finance the project.

HUD Ended Another Financial Management System Improvement Project Before Completion

The New Core Project was the second project HUD had initiated since fiscal year 2003 to replace its core financial management system. The previous project, HIFMIP, was based on plans to implement the Integrated Core Financial System (ICFS) to replace two of the applications used for core processing, HUDCAPS and PAS. We reviewed the implementation of ICFS during fiscal year 2012 and concluded that OCFO did not properly plan and manage the implementation of that project.[18] The contract for HIFMIP was awarded in September 2010. In March 2012, work on HIFMIP was stopped, and the project was later canceled. HUD spent more than $35 million on HIFMIP. When HUD ended HIFMIP, it immediately moved forward to develop a new plan.

The New Core Project began with an alternatives analysis to determine HUD's process for moving forward. In July 2013, the results of the analysis were issued, recommending that HUD move to the FSSP. The New Core Project had the same scope as HIFMIP, which was to replace, at a minimum, the functionality required to decommission HUDCAPS and PAS.

Through June 2016, HUD spent $96.3 million on implementing the New Core Project. The following table breaks out the details of that spending.

[18] Audit report 2013-DP-0003, issued December 19, 2012

Payee	Amount of funds spent
ARC implementation interagency agreement	$ 24,700,000
ARC interagency agreement for NCIS support	4,498,000
Fiscal years 2015 and 16 salaries and expenses (ARC operations and maintenance interagency agreements)	30,300,000
Contracted support	21,327,637
Full-time employee support	12,500,000
Fiscal year 2016 IT fund operations and maintenance (NCIS support)	3,000,000
Total	96,325,638

Through June 2016, ARC had been paid the total value of the initial implementation interagency agreement, an additional interagency agreement for support of NCIS, and an additional interagency agreement related to the operating costs for the services that had transitioned. Although HUD had not received all of the functionality that was to be provided under the initial shared services agreement, such as funds management of the data in the legacy applications, ARC had been paid the full amount of the initial implementation interagency agreement.

HUD Could Not Decommission All of the Applications That It Wanted To and Did Not Achieve the Cost Savings Planned

HUD planned to decommission 17 applications[19] with full implementation[20] of the New Core Project. Of the 17 systems it planned to decommission, only 6 were planned to be decommissioned through the implementation of phase 1, release 3. Of those six applications, only two had been decommissioned as of June 2016. These were the applications that HUD used for travel and a bond payment system. HUD was developing plans to decommission the application it used to support its interfaces with the payroll system and the application that tracked and recorded expenses for government employee relocation. However, these plans had not been finalized. HUD's time and attendance application had not been decommissioned, although the functionality was replaced by the FSSP in February 2015.

In the initial alternatives analysis for the New Core Project, cost savings were primarily planned as a result of decommissioning its legacy systems, upgrading its infrastructure, and realigning its resources. The goals of the modernization were to make both HUD's mission-supporting systems and core accounting more responsive and auditable and less costly to maintain. **However, since HUD had not been able to decommission applications, it did not achieve the cost savings planned and must continue to pay the operating and maintenance expenses for the legacy applications. For fiscal year 2016, HUD had increased its estimated budget for**

[19] See appendix A for detail on the systems HUD planned to decommission with the New Core Project as of May 2015.

[20] Full implementation of the New Core Project included the completion of all phases of the project, not just phase 1.

operating and maintaining financial management systems by more than $5 million. This increase was included to sustain the system interface with Treasury for the New Core Project.

HUD's fiscal year 2017 budget request included additional funding to implement New Core. Since the project has ended, that funding will be needed to complete the projects initiated to decommission HUDCAPS and create an Enterprise Data Warehouse.

Conclusion

Since 2003, HUD had spent more than $131 million on two separate projects to replace its core financial system. With the implementation of the New Core Project, ARC employees became responsible for processing portions of HUD's financial management functions and transactions related to travel and relocation (implemented with release 1), time and attendance (implemented with release 2), accounting, budgeting, finance, reporting, and procurement (implemented with release 3). HUD considered this transition complete. HUD stated that it had benefited from the implementation of shared services in that it allowed HUD greater insight into its data, identified opportunities to address unknown weaknesses in its past practices, and positioned it to leverage greater standardization HUD-wide. Our review revealed that the transition to the FSSP failed to meet expectations. A year after implementation of shared services, HUD

- Had inaccurate data due to the conversion of data to Oracle Financials and PRISM™;
- Continued to execute programmatic transactions in its legacy applications;
- Had increased the number of batch processes needed to record financial transactions;
- Had added manual processes and timing delays to the processing of financial transactions; and
- Had not classified the interface between HUD and ARC as mission critical, and it was not covered under HUD's disaster recovery plan.

HUD encountered significant challenges with its transition to ARC's financial management services and Oracle Financials. Funding shortfalls as well as the impact of HUD's decisions regarding the project ultimately impaired the effectiveness of HUD's internal controls and the efficiency and effectiveness of its operations instead of improving them. Despite ample evidence that HUD was not prepared to transition key functions without putting departmental operations in danger of disruption, financial management and IT governance failures led management to disregard or underestimate significant risks. Additionally, despite departmental, OIG, and GAO input to the contrary, HUD continued to misrepresent to stakeholders and the Federal Government community that New Core and the transition to shared services was a success. As HUD assesses future financial management improvements, it needs to ensure that each project is properly planned and managed, its objectives are met, and additional funding spent is appropriate.

Recommendations

We recommend that the Deputy Secretary

1A. Reevaluate the functionality initially planned under the New Core Project and determine how the agency will implement the functionality needed for budget

formulation, cost accounting, property management, and the consolidation of HUD's financial statements.

1B. Take an active role in the implementation of financial management improvement initiatives-projects moving forward to ensure collaboration within HUD and that adequate funding and governance are in place.

We recommend that the Office of the Chief Financial Officer

1C. Work with OCIO to ensure that connectivity between the HUD SFTP server and ARC is established in both the production and disaster recovery data centers.

1D. Develop a process or mechanism to operate in the absence of an SFTP server at the fail-over data center.

1E. Work with OCIO and complete any additional steps needed to ensure that NCIS is officially designated as a mission-critical system, listed in IAS as mission critical, and placed on the mission-critical disaster recovery platform.

1F. Share the results of the release 3 implementation review to guide future system implementations with the OCIO teams running the projects to decommission HUDCAPS and create an Enterprise Data Warehouse.

1G. Establish and maintain a team of key staff members to work with OCIO on the projects to decommission HUDCAPS and create an Enterprise Data Warehouse.

We recommend that the Office of the Chief Information Officer

1H. Develop and implement procedures to perform a formal assessment of systems that reside outside HUD's infrastructure to determine whether HUD has specific responsibilities related to a system, such as a component that is managed by HUD.

1I. Work with OCFO to include NCIS in disaster recovery testing to ensure that NCIS functionality can be recovered in the event of a disaster.

1J. Revise the instructions in the HUD mission-critical questionnaire to

- Clarify that HUD systems can be mission critical and included in HUD's disaster recovery exercises even if they are hosted outside HUD's infrastructure.
- Inform system owners that to have their mission-critical systems included in HUD's disaster recovery exercises, the systems must be listed as mission critical in IAS.
- Identify the steps that owners of mission-critical systems must take to ensure that their systems are correctly designated as mission critical in IAS.

1K. Implement a process to have OCIO officials review, approve, and formally document all mission criticality decisions.

1L. Ensure that the project plans for the decommissioning of HUDCAPS and the Enterprise Data Warehouse are coordinated with OCFO and ARC.

We recommend that the Office of the Chief Procurement Officer

1M. Complete actions to correct all of the values in PRISM™-SAMS-Oracle Financials that are in error from the data conversion.

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Scope and Methodology

The audit covered the period October 1, 2015, through September 30, 2016. We performed the audit at HUD headquarters in Washington, DC. Audit work was conducted from March 3 through October 21, 2016. Our audit was based on the U.S. Government Accountability Office's Federal Information System Controls Audit Manual methodology and IT guidelines established by the National Institute of Standards and Technology.

We conducted the audit to assess the effectiveness of the controls over NCIS and PRISM™ and the impact of the implementation of phase 1, release 3, of the New Core Project on the preparation of HUD's financial statements.

To evaluate the internal controls, we assessed

- System documentation for NCIS, PRISM™, and the New Core Project;
- User access information for NCIS;
- Audit logs for NCIS;
- HUD's policies related to access controls, segregation of duties, contingency planning, and data processing; and
- Results of other audit work performed.

We conducted the audit 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 objective(s). We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective.

Internal Controls

Internal control is a process adopted by those charged with governance and management, designed to provide reasonable assurance about the achievement of the organization's mission, goals, and objectives with regard to

- Effectiveness and efficiency of operations,
- Reliability of financial reporting, and
- Compliance with applicable laws and regulations.

Internal controls comprise the plans, policies, methods, and procedures used to meet the organization's mission, goals, and objectives. Internal controls include the processes and procedures for planning, organizing, directing, and controlling program operations as well as the systems for measuring, reporting, and monitoring program performance.

Relevant Internal Controls

We determined that the following internal controls were relevant to our audit objective:

- Access controls,
- Segregation of duties controls,
- Contingency planning, and
- Business processing controls over the data conversion between HIAMS and PRISM™ and the handling of split-funded contracts.

We assessed the relevant controls identified above.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, the reasonable opportunity to prevent, detect, or correct (1) impairments to effectiveness or efficiency of operations, (2) misstatements in financial or performance information, or (3) violations of laws and regulations on a timely basis.

Significant Deficiencies

Based on our review, we believe that the following items are significant deficiencies:

- HUD had weaknesses in controls over data conversion (finding 1).
- HUD had weaknesses related to added batch processes and manual transactions (finding 1).
- HUD had weaknesses related to project management (finding 1).

Appendixes

Appendix A

Systems HUD Planned To Decommission With the Implementation of the New Core Project as of May 2015

System code	System	Decommission date	Release number
A75	HUDCAPS - HUD Central Accounting and Program System	TBD* - no earlier than FY** 2017	Future release
A96	PAS - Program Accounting System	TBD - no earlier than FY 2017	Future release
A75R	FDM - Financial Data Mart	TBD	Future release
A39	HFM – Hyperion Financial Management	FY 2016	Release 3
P273	HIAMS - HUD Integrated Acquisition Management System	FY 2016	Release 3
P221	FedTraveler - travel system	FY 2015	Release 1
H18	mLINQ - moveLINQ system	FY 2015	Release 1
D91A	TEAM - Total Estimation and Allocation Mechanism	TBD	Future release
A75I	PSCRS - Personnel Services Cost Reporting Subsystem	FY 2016	Release 3
P262	WEBTA - Web Time and Attendance	FY 2015	Release 2

System code	System	Decommission date	Release number
A21	LAS-NLS - Loan Accounting System	TBD	Future release
A67	LOCCS - Line of Credit Control System	TBD	Future release in phase 2 or 3
D08	BOND - bond payment system	FY 2015	
D61	EZBudget - EZBudget Formulation System	TBD	
D67A	FIRMS - Facilities Integrated Resource Management System	FY 2016	
P035/A35***	SPS-HPS - Small Purchase System-HUD Procurement System	FY 2016	These are legacy procurement systems predating HIAMS and will need a strategy to decommission in coordination with HIAMS.
P013	FHA-SL - FHA Subsidiary Ledger	TBD	Future release in phase 2 or 3
P237	GFAS - Ginnie Mae Financial and Accounting System	TBD	Future release in phase 2 or 3

* TBD = to be determined
** FY = fiscal year
*** HPS and SPS were not included in our calculations for the project because they were planned to be decommissioned when HIAMS was implemented in fiscal year 2012.

Appendix B

Auditee Comments and OIG's Evaluation

Ref to OIG Evaluation

Auditee Comments

Comment 1

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-3000

OFFICE OF THE CHIEF FINANCIAL OFFICER

December 13, 2016

MEMORANDUM FOR: Dorothy Bagley, Director, Information Systems Audit Division, GAA

FROM: Joseph I. Hungate III, Assistant Chief Financial Officer for Systems, FY

SUBJECT: Response to OIG Draft Audit Report titled, "New Core Project: Shared Service Implementation Failed to Meet Expectations"

This memorandum is in response to your November 22, 2016 Draft Audit Report (2017-DP-00XX) titled, "New Core Project: Shared Service Implementation Failed to Meet Expectations". We have reviewed this report and have provided our responses below.

General Comments

OCFO appreciates the work that has gone into this exercise, though believes that the title, analysis, and conclusions of the draft report contain inaccuracies regarding the transition to Treasury shared services for the General Ledger. The successful completion of the New Core implementation with the transition of the General Ledger to Treasury's shared service platform and standards provides the foundation on which the Department can achieve greater accuracy, timeliness, and transparency in financial management.

New Core benefits include adopting standard federal accounting and financial management processes; strengthening HUD's internal controls and funds control processes (such as integrating HUD's procurement and accounting systems and improved payroll reporting); reducing risk of legacy system failure; and resolving known financial compliance issues. HUD further benefits by minimizing future modernization and upgrade costs by sharing costs with ARC's other Federal agency customers.

Any transformation of this size and complexity has inherent risks and challenges. However, New Core implemented a rigorous project management structure to manage these risks and challenges. Leadership from HUD, OMB, and Treasury were engaged in the New Core implementation throughout the duration of the project. HUD, in coordination with Treasury, implemented strong program management discipline – including risk management, schedule management, and change management. Effective governance was in place throughout the migration, including governance gates before each release. As a result, on October 1, 2015, the Department became the first Cabinet-level agency to move its core financial management systems to a Federal Shared Service Provider.

www.hud.gov espanol.hud.gov

The HUD and ARC partnership represents a significant milestone in improving financial management and serves as the foundation for greater delivery of shared services across the government. As evidence, HUD was recognized as the pioneering agency for the lessons learned for the Migration Modernization Management (M3) Playbook developed by the GSA, Unified Shared Services Management team.

In late April 2016, the Department completed close-out activities for the New Core Program. There are remaining capabilities initially intended for future phases and releases of the New Core including enterprise data management capabilities, grant and loan accounting and Housing Choice Voucher programs (Section 8, 202, 811, etc) accounting. HUD has undertaken an Enterprise Voucher Management System (eVMS) program which will transform the Housing Choice Voucher management processes and will be the next step on the path to decommissioning HUDCAPS. Additionally, the Enterprise Data Management (EDM) program will help HUD consolidate data from multiple sources including financial management and programmatic data. This will allow for reporting for the DATA Act and other requirements that will also support the decommission of reporting capabilities connected to HUDCAPS

In summary, the New Core program moved the Department closer to its goal of a modernized, disciplined financial environment that efficiently and effectively supports HUD's program mission goals and identified many valuable lessons learned for future shared services migrations.

Other Comments

Comment 2

In response to page 5, "in April 2016, HUD ended the New Core Project and the transition to an FSSP after spending $96.3 million, however the transition did not allow HUD to decommission all of the applications it wanted...", the actual development, modernation and enhancement (DME) costs was $50.5 million. The remaining $45.8 million was for operations and maintenance (O&M) costs. Therefore, the implementation cost was $50.5 million, not the $96.3 million figure referenced by the OIG.

Comment 3

In response to page 5, "…unresolved data conversion errors estimated at an absolute value of more than $9 billion as of June 2016", this is not an accurate depiction of the effective net total amount of budgetary resources. The issue is the realignment of data attributes. The overarching issue associated with default values is that 1.4% of all budget lines in Oracle Federal Financials that are not associated with cancelled authority contain default values for certain accounting code attributes [i.e., Accounting Flex Field (AFF) values]. Also, in regards to $4.5 billion differences between HUDCAPS and Oracle Financials, ARC just completed running their year-end close the first weekend of December 2016 and made adjustments to the beginning balances last week. OCFO will load the new beginning balances into NCIS the week of December 12, 2016 and will have an updated value the week of December 19, 2016 (because of timing differences it is best to run this report once a week).

Comment 4

In response to page 6, "through July 2016, HUD has made annual adjustments to 205 contracts totaling more than $59 million. An additional 20 contracts valued at $38 million still required correction", all contracts, requiring adjustments or corrections, have been adjusted or corrected and loaded to PRISM.

Comment 5

In response to page 8, "… HUD used 9 applications to process travel and relocation, time and attendance, accounting, budgeting, finance, reporting, and procurement. In fiscal year 2016, the number increase to 14", OCFO disagrees with this statement. The New Core Program's Phase 1, Releases 1, 2, and 3's migration to Treasury, ARC's Federal shared services provider platform utilized the following eight (8) systems:

1. Concur Government Edition (CGE)
2. moveLINQ
3. Kornos WebTA
4. CitiBank
5. Oracle Federal Financials
6. Compusearch PRISM
7. Treasury Fiscal Service, Invoice Processing Platform (IPP)
8. New Core Interface Solution (NCIS)

Comment 6

Additionally, the following ten (10) legacy systems and contracts are in various stages of closure:

1. CitiBank – HUD's Contract – Contract not renewed
2. FedTraveler – Contract not renewed
3. eTravel interface (eTS) - Decommissioned
4. WebTA at NFC – Contract not renewed
5. moveLINQ (HUD Contract) – Contract not renewed
6. Total Estimation & Allocation Mechanism – Resource Estimation & Allocation Process (TEAM-REAP) – Decommissioned
7. Personal Services Cost Reporting Subsystem (PCSRS) - Deactivated
8. Small Purchase System (SPS) – To be decommissioned Q3 FY2017
9. HUD Integrated Acquisition Management System (HIAMS) - Compusearch PRISM – To be decommissioned Q4 FY2017
10. HUD Procurement System (HPS) – To be decommissioned Q4 FY2017

Comment 7

In response to page 9 and 10, "ARC began reconciling HUD legacy sub ledgers data to the general ledger with month end numbers for March 2016. As of September 2016, ARC was still working with HUD to identify all of the subledgers required to reconcile the data. Meanwhile, for the reconciliations that ARC performed through September 2016, differences totaling $29.38 billion were identified. HUD created a team to resolve these differences", the bulk of the $29.38 billion is related to New Housing Authority Bonds ($22 billion) and Federal Financing Bank ($5 billion).

OCFO has received confirmation from the Federal Financing Bank to eliminate the Obligations from the HUD legacy subsidiary. OCFO is working on the documentation necessary to remove the Obligations for the New Housing Authority Bonds from the HUD legacy subsidiary.

Comment 8

In response to page 11, "HUD Experienced Funding Shortfalls with the Implementation of the new Core Project", the Department also agrees with the OIG that funding constraints diminish HUD's ability to integrate application systems and retire legacy systems. Legacy IT systems continue to pose a risk to HUD programs and customers.

Comment 9

Comment 10

Finding 1: New Core Implementation Failed to Meet Expectations

OIG Recommendation 1C: Work with OCIO to ensure that connectivity between the HUD SFTP server and ARC is established in both the production and disaster recovery data centers.

OCFO Response: Once OCIO provides the HUD SFTP capability in the disaster recovery data center for NCIS, OCFO will work with OCIO to ensure that the connectivity between the HUD SFTP server and ARC is established in both production and DR data centers.

OIG Recommendation 1D: Develop a process or mechanism to operate in the absence of an SFTP server at the fail-over data center.

OCFO Response: OCFO has the following process/mechanism in place to operate in the absence of an SFTP server at the fail-over data center:

- **Process 1:** If the SFTP production servers are down, but not the SFTP Test server, then HUD would modify the IP address and directory structure in the control file on the SFTP Test server to transfer the file.

- **Process 2:** If both the SFTP Production and Test servers are down, then each side (HUD/ARC) would have to store the files until service is restored.

Additionally, OCFO and ARC will verify that all data are accurately processed by performing a file level reconciliation between HUD, NCIS, and ARC as follows:

The Budget File Level Reconciliation:

1. NCIS generates the list of incoming ARC budget files.
2. NCIS provides the list of files to ARC for verification.
3. ARC will verify/confirm the of number files. If correct, no action. If incorrect ARC send NCIS, the missing file for processing.
4. NCIS provides this list of files to HUD for verification.
5. HUD will verify/confirm the number files. If correct, no action. If incorrect NCIS send HUDCAPS, the missing file for processing.

The General Ledger (GL) File Level Reconciliation:

1. NCIS generates the list of incoming HUDCAPS GL files.
2. NCIS provides the list of files to HUD for verification.
3. HUD will verify/confirm the of number files. If correct, no action. If incorrect HUDCAPS send NCIS, the missing file for processing.
4. NCIS provides this list of files to ARC for verification.
5. ARC will verify/confirm the number files. If correct, no action. If incorrect NCIS send ARC, the missing file for processing.

The General Ledger (GL) Confirmation File Level Reconciliation:

1. NCIS generates the list incoming GL confirmation files from ARC.

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2. NCIS provides the list of files to ARC for verification.
3. ARC will verify/confirm the of number files. If correct, no action. If incorrect ARC send NCIS, the missing file for processing.

OIG Recommendation 1E: Work with OCIO and complete any additional steps needed to ensure that NCIS is officially designated as a mission-critical system, listed in IAS as mission critical, and placed on the mission-critical disaster recovery platform.

Comment 11

OCFO Response: OCFO will continue to follow up with the OCIO to ensure that NCIS is officially designated as a mission critical system in IAS.

OIG Recommendation 1F: Share the results of the release 3 implementation review to guide future system implementations with the OCIO teams running the projects to decommission HUDCAPS and create an Enterprise Data Warehouse.

Comment 12

OCFO Response: OCFO has shared the results of the New Core Project Release 3 "Summary of Lessons Learned" with the OCIO team.

OIG Recommendation 1G: Establish and maintain a team of key staff members to work with the OCIO on the projects to decommission HUDCAPS and create an Enterprise Data Warehouse.

Comment 13

OCFO Response: OCFO has already established a team of key staff to work with the OCIO on the projects to decommission HUDCAPS and create the Enterprise Data Management system.

We look forward to working with you and your staff to resolve and close-out the recommendations.

If you have any questions or need additional information, please contact Simin D. Narins at 202-402-3705.

cc:
Christopher B. Davies, Deputy Assistant CFO for Systems, FY
Simin D. Narins, Director, Financial Systems Quality Assurance Division, FYA
MelaJo K. Kubacki, Deputy Assistant CFO for Financial Management, FM
Larry McGhee, Director, Audit Liaison Division, FMA

Ref to OIG Evaluation

U.S. Department of Housing and Urban Development
Washington, D.C. 20410

CHIEF PROCUREMENT OFFICER

DEC 15 2016

MEMORANDUM FOR: Randy W. McGinnis, Assistant Inspector General for Audit, GA

FROM: Keith W. Surber, Chief Procurement Officer, N

SUBJECT: Audit Report Number 2017-DP-00XX, December XX, 2016; HUD's Transition to a Federal Shared Service Provider Failed to Meet Expectations

Thank you for the opportunity to comment on the subject audit report. We appreciate your consideration of our comments on the initial draft and revising the final report accordingly. We are providing the below comments in response to the final report.

Although the conversion from HIAMS to ARC's PRISM™ was problematic, it was not to the extent that we were helpless while we were working through the issues. We envisaged there would be issues with the conversion based on our experience on a similar effort, conversion from SPS and HPS to HIAMS, that we undertook two years before the conversion of HIAMS to ARC's PRISM™. Based on that experience, we were prepared and had processes in place in the event there were conversion problems. One of the processes we had in place was the manual obligation of funds on awards. Another measure was the creation of the "Issue Management Log" specifically for the conversion of HIAMS to ARC's PRISM™. The log helped us in tracking issues arising from the conversion right from the point of discovery through the resolution of the issues with weekly meetings in order to provide status to all stakeholders.

Comment 14

These measures we had in place helped us in navigating through the various issues, and our experience would have been worse if we were not prepared. All the conversion issues identified on the Issue Management Log have been resolved and closed. We continue to work with ARC using this process to identify any post-conversion issues or enhancements that they can make to further improve the systems.

It is important to point out that, while there were conversion issues during the acquisition portion of the implementation, the transition has provided significant acquisition-related benefits to the Department, especially in the area invoice processing. The implementation of the Invoice Processing Platform for processing contractor invoices has significantly improved the visibility and controls in this area.

OIG Recommendation 1M calls for completion of actions to correct all of the values in PRISM™, SAMS, and Oracle Federal Financials that are in error from the data conversion. We agree with the recommendation, and can report that this has already been completed.

Ref to OIG Evaluation

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-3000

CHIEF INFORMATION OFFICER

DEC 0 5 2016

MEMORANDUM FOR: Randy W. McGinnis, Assistant Inspector General for Audit, GA

FROM: Rafael C. Diaz, Chief Information Officer, Q

SUBJECT: Comments to the Draft Audit Report on the New Core Project: HUD's Transition to a Federal Shared Service Provider Failed to Meet Expectations

Comment 15

This memorandum is in response to the November 22, 2016, draft audit report entitled, "*New Core Project: HUD's Transition to a Federal Shared Service Provider Failed to Meet Expectations.*" My staff and I have reviewed the subject audit report and concur with the findings and recommendations as addressed to the Office of the Chief Information Officer (OCIO).

We look forward to working with you and your staff to resolve and close-out the recommendations. Should you have any questions or need additional information, please contact Wyneè Watts-Mitchell at (202) 402-3893 and Ruby Porch at (202) 402-6342 for the Audit Compliance Branch.

OIG Evaluation of Auditee Comments

Comment 1 We disagree with OCFO's comments that the report title, analyses, and conclusions contain inaccuracies. Although we agree that HUD has benefited from some aspects of the New Core implementation, the results of audit work performed support the conclusion that the implementation failed to meet expectations and did not significantly improve the handling of HUD's financial management transactions. This is the fourth audit in a series of audits that we have completed on the New Core implementation. Previous audit work revealed significant weaknesses in the areas of risk, schedule, and project management.

Comment 2 We have not received documentation in support of OCFO's comments; therefore, we cannot make an assessment regarding them. The information presented within the audit report reflects the amount of funding that was spent on the implementation as provided by OCFO during our audit.

Comment 3 We disagree with OCFO's comments. The results of the unresolved data conversion errors were estimated at an absolute value of more than $9 billion as reported in audit report 2016-DP-0004. We have not received documentation in support of OCFO's comments regarding the differences between HUDCAPS and Oracle Financials in December 2016; therefore, we cannot make an assessment regarding them.

Comment 4 We have not received documentation in support of OCFO's comments; therefore, we cannot make an assessment regarding them.

Comment 5 We disagree with OCFO's comment. The list provided by OCFO in its response does not include the HUD legacy applications, for example LOCCS and HUDCAPS, which are still used to process transactions.

Comment 6 We have not received documentation in support of OCFO's comments; therefore, we cannot make an assessment regarding them.

Comment 7 We have not received documentation in support of OCFO's comments; therefore, we cannot make an assessment regarding them.

Comment 8 We acknowledge OCFO's comment and look forward to working with OCFO to ensure that the actions proposed or taken are sufficient to address the weaknesses cited.

Comment 9 We acknowledge OCFO's comment and look forward to working with OCFO to ensure that the actions proposed or taken are sufficient to address the weaknesses cited.

Comment 10 We have not received documentation in support of OCFO's comments; therefore, we cannot make an assessment regarding them. We look forward to working with

OCFO to ensure that the actions proposed or taken are sufficient to address the weaknesses cited.

Comment 11 We acknowledge OCFO's comment and look forward to working with OCFO to ensure that the actions proposed or taken are sufficient to address the weaknesses cited.

Comment 12 We have not received documentation in support of OCFO's comments; therefore, we cannot make an assessment regarding them. We look forward to working with OCFO to ensure that the actions proposed or taken are sufficient to address the weaknesses cited.

Comment 13 We have not received documentation in support of OCFO's comments; therefore, we cannot make an assessment regarding them. We look forward to working with OCFO to ensure that the actions proposed or taken are sufficient to address the weaknesses cited.

Comment 14 We acknowledge OCPO's comments and agree that OCPO used the experience from its previous conversion to establish processes and procedures to address data conversion issues. We have not received documentation in support of OCPO's statements regarding the status of the data conversion issues; therefore, we cannot make an assessment regarding them. We look forward to working with OCPO to ensure that the actions proposed or taken are sufficient to address the weaknesses cited.

Comment 15 We acknowledge OCIO's comments and look forward to working with OCIO to ensure that the actions proposed or taken are sufficient to address the weaknesses cited.