



*U.S. DEPARTMENT OF COMMERCE
Office of Inspector General*



U.S. Census Bureau

*FDCA Program for 2010 Census
Is Progressing, but Key Management and
Acquisition Activities Need to be Completed*

Final Inspection Report No. OSE-17368/August 2005

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Office of Systems Evaluation



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MEMORANDUM FOR Charles Louis Kincannon
Director, Bureau of the Census

FROM: Johnnie E. Frazier

SUBJECT: *FDCA Program for 2010 Census Is Progressing, but Key Management and Acquisition Activities Need to Be Completed*
Final Inspection Report No. OSE-17368

This report presents the results of our survey of the Census Bureau's progress in planning and managing the Field Data Collection Automation (FDCA) program for the 2008 dress rehearsal and 2010 decennial census. FDCA is an \$800 million effort to automate field data collection and provide services such as logistics, training, and help desk support for 12 regional centers, more than 450 local census offices, and up to 500,000 field staff. The key technology component of this effort is a mobile computing device equipped with Global Positioning System capabilities, which field staff are to use to accurately locate housing units, update address lists and maps, and collect questionnaire data. By replacing many paper-based field data collection processes with automation, Census expects to reduce overall 2010 census costs by as much as \$900 million compared to the cost of repeating the paper-based processes used in 2000, and improve data quality and operational efficiency.

Despite the magnitude and complexity of the effort, Census had originally intended to develop FDCA internally with contractor support. However, in early 2004, the bureau determined that it did not have the management or technical resources to develop field data collection systems for the dress rehearsal and 2010 census while simultaneously supporting its 2004 and 2006 site tests. Consequently, the bureau decided to acquire the services of an integration contractor¹ for the entire effort.

When we began our fieldwork in fall 2004, activities to plan the acquisition were being performed, but progress was slow. FDCA lacked a project management office² and project plan, and by the end of 2004, key internal acquisition milestones had been missed. In January 2005, the FDCA program underwent a major reorganization. The bureau established a FDCA project management office, appointed a new project manager, developed an acquisition strategy that addresses the shortened schedule, and appears to be on track in implementing the acquisition strategy.

¹ An integration contractor has overall contractual responsibility for managing the project, developing the system, integrating system components supplied by subcontractors, and assembling, testing, and deploying the system.

² The Census Bureau refers to FDCA as a program but uses the terms "project management office" and "project manager" for the entities we discuss in this report.



However, the late decision to use an integration contractor and the initial slow pace in planning the acquisition have shortened the amount of time available for awarding the contract and developing FDCA. Consequently, the risk of not having systems and services ready by April 2007 for address canvassing, the first major field operation in the dress rehearsal, has increased. Census needs to develop a sound project management plan, formulate and report objective measures of progress for bureau and Department oversight, and develop procedures and training for the technical interchanges that will take place between Census and offerors during source selection.³

Discussion of Census Bureau's Response to the Draft Report

In its written response to our draft report of June 6, 2005, the Census Bureau indicates that it has no major disagreements with our findings and recommendations, and states that the bureau has taken actions to correct the deficiencies noted in the report. The response further states that additional project documentation is being developed, including a project management plan, and notes that the bureau has met all of its acquisition milestones since January 2005.

However, the bureau does not agree with our statements that key internal acquisition milestones had been missed by the end of 2004 and that the acquisition will take longer because of the technical exchange associated with the address canvassing prototype (see page 8). We based our statements on the milestones in the "FDCA Acquisition Roadmap," a briefing the bureau presented to us on October 29, 2004. At that time, the bureau had planned to complete a revised cost estimate in November 2004 and to have completed the acquisition strategy, source selection plan, functional requirements, and selection of alternatives in December 2004. Although the bureau described its revised acquisition strategy to us in a meeting held on January 19, 2005, none of these items that were to have been completed the previous November and December were available. Also, according to the roadmap, the contract was to be awarded in December 2005 using an acquisition strategy that did not include the prototype and technical exchange with offerors prior to contract award. The planned award date under the revised strategy with the prototype and technical exchange is April 2006.

The bureau's response to the draft report is included in its entirety as an attachment. Please provide an action plan within 60 calendar days identifying the actions taken or planned for each recommendation. If you have any questions about this report, please contact me on (202) 482-4661 or Judith Gordon, Assistant Inspector General for Systems Evaluation, on (202) 482-5643. We appreciate the cooperation and courtesies your staff extended to us during our survey.

³ Source selection is the process of selecting the offeror's proposal that represents the best value.

OBJECTIVES, SCOPE, AND METHODOLOGY

In the fall of 2004, we began an inspection survey of the bureau's progress in planning and managing FDCA and acquiring an integration contractor. Because of FDCA's importance to the decennial and the major reorganization of the program that occurred as we were concluding our fieldwork, we decided to report on the risks we identified during our survey and recommend mitigating measures instead of starting a formal inspection. Census agreed with this approach.

We interviewed senior Census Bureau management, including the associate director for decennial census, the assistant director for decennial information technology and geographic systems, the assistant director of the American Community Survey and decennial census, and FDCA program and contracting principals, as well as officials overseeing the 2010 census in the Department's Office of the Chief Information Officer. We reviewed program documentation including capital asset plans and business cases (OMB Exhibit 300s) and schedules, as well as documents in the FDCA acquisition library concerning the program scope, 2004 site test, and 2010 planning. We also used federal guidance and best practices in contracting and program management from sources such as the *Federal Acquisition Regulation* and *Project Management Institute Body of Knowledge*.

We conducted our fieldwork from October 2004 through April 2005. We limited our review to FDCA's management and acquisition approach. We performed our work in accordance with the Inspector General Act of 1978, as amended, and the *Quality Standards for Inspections*, March 1993, issued by the President's Council on Integrity and Efficiency.

FINDINGS AND RECOMMENDATIONS

I. The Bureau's Late Decision to Use an Integration Contractor and Slow Start in Implementing Project Management Have Increased Risk

When the bureau formulated its decennial reengineering plan in 2001, it identified significant savings associated with the development of systems that would automate field data collection activities. At that time, officials in the field and decennial directorates intended for bureau employees to develop those systems. Capital asset planning for the decennial reflected this approach, and the costs, benefits, and risks of alternative acquisition strategies were not evaluated. The decision to use an integration contractor for FDCA was made in early 2004 when efforts to develop and implement field data collection systems for the 2004 and 2006 tests revealed the lack of adequate internal resources. The capital asset plan for fiscal year 2006 documents the need for a program increase to fund contract management for FDCA due to this change in approach. For future complex IT projects, Census should consider contracting for the entire effort as part of its early capital asset planning process.

After the need for an integration contractor was recognized, a scope document describing the major elements of FDCA was prepared, market research was begun, and an "acquisition roadmap"—a high-level outline of the acquisition schedule and milestones—was developed. According to the acquisition roadmap, several important documents, including the acquisition strategy, source selection plan, and functional requirements were to be completed by the end of 2004. These milestones were missed. In addition, at the end of 2004, almost a year since the decision to contract for FDCA had been made, a project office still had not been established and a project plan had not been developed. We attribute this slow progress primarily to the fact that the field directorate, which was in charge of FDCA at that time, did not have experience managing large information technology (IT) acquisitions, and many of its technical personnel were occupied with completing the 2004 site test and preparing for the 2006 site test.

One important impact of these delays is the missed opportunity for the FDCA contractor to observe and perhaps test part of its solution in the 2006 site test. Decennial census officials point out that it takes industry a long time to understand Census requirements. Thus, the opportunity to observe the 2006 test could have provided the contractor with a level of understanding of how a decennial is planned and conducted that would be difficult to obtain in any other fashion. By the time the contract is awarded in April 2006, however, most of the planning and preparation for the 2006 test, as well as the address canvassing operation will have been completed. While the 2006 test is expected to give bureau staff a better understanding of FDCA requirements, we believe that the resources expended on conducting the test would have been of greater benefit to the decennial if the FDCA contractor had an opportunity to be involved.

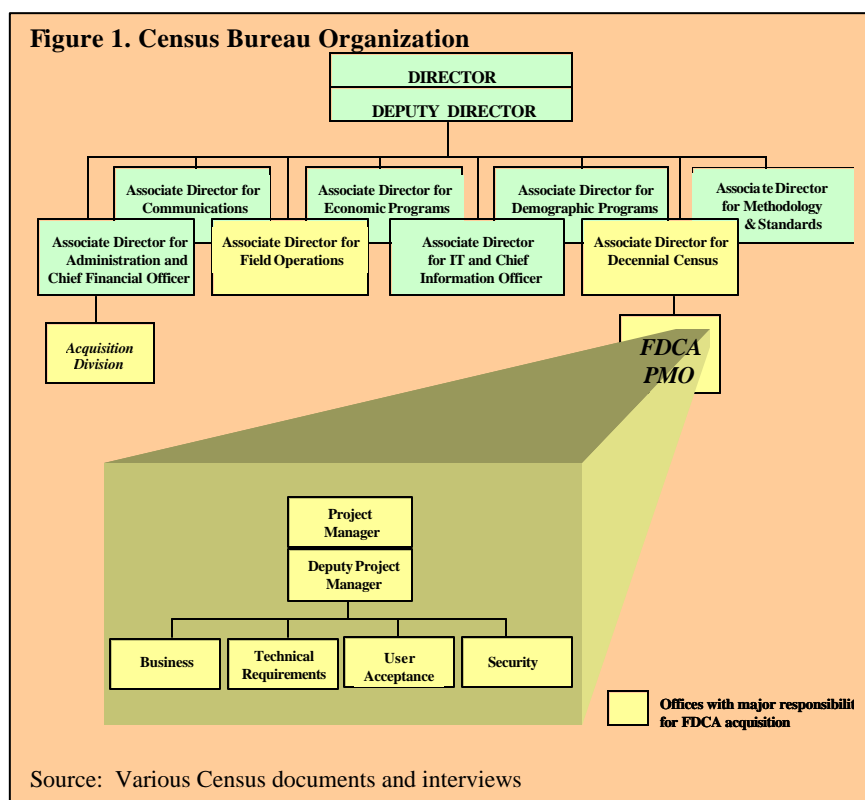
Recommendations

The Census Bureau Director should direct appropriate management officials to take the following actions:

1. For future complex IT projects, consider contracting for the entire effort early in the capital asset planning process.
2. Assign responsibility for planning and managing complex IT projects to Census organizations with appropriate experience.

II. Project Office Established, But Project Management Planning Needs to Be Completed

In January 2005, the deputy director of the Census moved FDCA management responsibilities from the field operations directorate to the decennial census directorate. A new project manager was appointed, and a project management office was created. The new project office reports



directly to the assistant director for decennial IT and geographic systems. The organization of the FDCA office is similar to the project management offices Census has used for other large IT acquisitions.⁴ It consists of a project manager, a deputy project manager, and a number of line managers. (See the organization chart in Figure 1.) The bureau is working to fill 14 positions in fiscal year 2005 and at the time of our fieldwork, had filled several key management positions with personnel experienced in managing large IT system and

service contracts and knowledgeable about decennial operations. At the project's peak, the bureau expects to have about 60 personnel in total consisting of Census employees and support contractors. Although responsibility for FDCA has been moved, organizations with major responsibility for the 2010 census are represented—the project manager is from the decennial census directorate and the deputy is from the field operations directorate.

⁴ For example, the Data Capture System for the 2000 census and the Data Response Integration System for the 2010 census.

Because of the need to award the integration contract as soon as possible to meet decennial deadlines, the bureau's focus has been on developing the acquisition strategy and solicitation at the expense of overall project planning. The bureau formulated an acquisition strategy that addresses the shortened timeframe (see page 7) and completed key sections of the draft solicitation, which was posted on its business opportunities website in April for industry comment. Census should now develop a sound project management plan to ensure that pre- and post-contract award activities are properly formulated, executed, monitored, and controlled. The plan should be based on an analysis of all work needed to complete FDCA and detail the cost, schedule, and performance baselines against which project execution can be compared and deviations measured. The plan should also identify risks that could jeopardize the solicitation, source selection, or project execution, along with mitigation strategies, and identify high priority activities that must be completed on time in order for FDCA to meet its schedule (i.e., activities on the critical path).

Once the plan is completed, objective progress measures can be formulated and reported. Reporting progress against these measures is essential to effectively managing FDCA on a day-to-day basis and for senior Census and Department management to monitor the program. Although the Department's Assistant Secretary for Administration and Chief Information Officer and their staffs have been meeting quarterly with Census officials since November 2003 to review FDCA and other decennial programs, we have found that without objective measures, they lack sufficient information for monitoring the FDCA program.

Although the contractor will be required to file earned value⁵ reports, the project office should also plan and objectively report on essential internal activities, such as managing requirements, testing systems, and ensuring compliance with IT security policies throughout the project life cycle. Basing Census's FDCA reporting on objective measures and providing reasons for any deviations from the baseline plan and their impacts, should help ensure that Census and Department officials and other interested stakeholders are adequately informed of the status of FDCA.

Recommendations

The Census Bureau Director should direct appropriate management officials to take the following actions:

1. Formulate a project management plan that describes project execution, monitoring, control, and reporting. At a minimum, the plan should include:
 - a. a detailed schedule, cost, and performance baseline;
 - b. identification of the critical path; and
 - c. project risks and mitigation strategies.
2. Regularly track program progress made against the cost, schedule, and performance baseline defined in the project management plan and determine the reasons for any deviations and their impact.

⁵ Earned value management is an objective, quantitative technique of measuring program progress by evaluating reliable program data against the baseline to support decision-making throughout the program's life cycle.

III. Acquisition Strategy Addresses Time Constraint, But Requires Careful Planning and Implementation

Census has identified having systems ready in time for dress rehearsal address canvassing in April 2007 as FDCA’s greatest risk since the integration contractor will have only about a year after contract award to prepare for the start of this operation.⁶ (See the high level FDCA milestones in Table 1.) The FDCA acquisition strategy, outlined in Table 2, was developed to mitigate schedule risk by having a limited number of offerors build prototype systems for address canvassing as part of the source selection process.

Table 1. High Level FDCA Milestones Through Dress Rehearsal

Date	Milestone
June 2005	Solicitation issued
April 2006	Contract Award
January 2007	RCC/LCO Open*
April 2007	Address Canvassing
April 2008	NRFU

*RCCs are the regional census centers; LCOs are the local census offices. Source: Various Census documents

Industry has shown considerable interest in FDCA,⁷ and project officials have been

concerned that sufficient resources are not available to evaluate a large number of proposals. Therefore, it is employing a strategy designed to limit the number of proposals while retaining those that are the most promising. To accomplish this, the bureau will use what it refers to as the “voluntary down select” process⁸ to advise potential offerors, based on their responses to a pre-solicitation notice, as to whether they are viable competitors for the contract. The intent is to

Table 2. FDCA Acquisition Strategy

Dates	Activities
February 2005	Information exchange with industry
April – May 2005	Issue pre-solicitation notice; evaluate offerors’ submissions and advise on competitive viability; at the same time issue draft solicitation
June – August 2005	Issue solicitation, evaluate offerors’ proposals and select the most highly rated ones
September 2005 – January 2006	Remaining offerors build prototype systems, participate in technical interchange meetings, offerors develop final proposal
February – April 2006	Evaluate final proposals and award contract

Source: FDCA Industry Symposium, February 23, 2005

discourage those not considered viable from competing, although they are not disqualified from doing so. In the next phase of the acquisition, Census will release the FDCA solicitation. The source selection team will evaluate the proposals that are received, and the contracting officer will then select the most highly rated proposals. These proposals are considered to be in the competitive range. At that point, the contracting officer has the option of further reducing the competitive range if there are more proposals than Census staff can evaluate in the next phase of source selection.⁹

⁶ Although Census intends to have all FDCA capabilities ready for dress rehearsal, they will only have to be deployed to 3 local census offices.

⁷ Ten potential prime contractors and about 35 subcontractors attended the February 28, 2005 FDCA industry symposium.

⁸ Refer to Federal Acquisition Regulation 15.202 Advisory multi-step process, which allows an agency to advise offerors of their likelihood of being a viable competitor based on a statement of their capabilities prior to the solicitation being issued.

⁹ Refer to Federal Acquisition Regulation 15.306(c)(2) Competitive range.

Offerors in the competitive range will develop at their own expense a “near production ready” prototype system for address canvassing, which will be evaluated as part of source selection. During this development effort, technical interchange meetings will be held at which Census personnel and offerors discuss various aspects of the prototypes, including system requirements. However, these technical interchanges add complexity to the source selection process in several ways. First, Census will need enough personnel who are well versed in FDCA system requirements to answer offerors’ questions. Also, these personnel will have to be aware of and abide by federal acquisition regulations requiring that they not favor one offeror over another or reveal proprietary information during these interchanges.¹⁰ FDCA officials have indicated that it may be a challenge to obtain enough staff for the prototyping phase. Finally, Census will have to make certain that any modifications to requirements resulting from these technical interchanges are documented and provided to all offerors. The director of the acquisition division told us that he plans to develop procedures and training material for conducting these interchanges.

FDCA officials believe there are several advantages to having multiple offerors develop a prototype—a better chance of having a working system ready for address canvassing, better information for identifying the most qualified contractor, and more accurate cost proposals from offerors—compared to selecting one contractor and concentrating bureau resources on working intensively with that contractor. However, the prototyping effort also extends the source selection schedule by about 4 months and requires an increased level of technical interchange between Census staff and offerors. This leaves less time after contract award to complete the remainder of the work needed to prepare for and begin dress rehearsal, as well as less time to communicate with the contractor without the constraints of source selection. In response to our concern about the complexity of technical interchange, Census officials pointed out that they have successfully conducted similar discussions on other large IT acquisitions in which offerors were required to demonstrate selected system features (operational capability demonstrations) during source selection. However, the technical interchanges required to build a “near production ready” prototype are likely to be more complicated and, therefore, place a higher demand on staff capabilities and management of source selection.

Recommendation

The Census Bureau Director should direct appropriate management officials to ensure that the complexity in the source selection process is addressed by:

- a. developing specific procedures for how Census staff will communicate with offerors during prototype development;
- b. training staff in these communication procedures; and
- c. documenting and providing to all offerors any requirements modifications that result from technical interchanges during prototype development.

¹⁰ Refer to Federal Acquisition Regulation 15.306(e) Limits on exchanges.

Attachment

cc: Kathleen B. Cooper, Under Secretary for Economic Affairs
Hermann Habermann, Deputy Director and Chief Operating Officer, U. S. Census Bureau
Preston Jay Waite, Associate Director for Decennial Census, U. S. Census Bureau
Marvin Raines, Associate Director for Field Operations, U. S. Census Bureau
Richard Swartz, Associate Director for Information Technology, U. S. Census Bureau
Arnold Jackson, Assistant Director for Decennial Census, U. S. Census Bureau
Edwin B. Wagner, Jr., FDCA Project Manger, U. S. Census Bureau
Mike Palensky, Chief, Acquisition Division, U. S. Census Bureau



Attachment

UNITED STATES DEPARTMENT OF COMMERCE
Economics and Statistics Administration
U.S. Census Bureau

Washington, DC 20233-0001

OFFICE OF THE DIRECTOR

JUL 11 2005

MEMORANDUM FOR Judith J. Gordon
Assistant Inspector General for Systems Evaluation
Office of Inspector General

Through: Kathleen B. Cooper *KB Cooper*
Under Secretary for Economic Affairs

From: Charles Louis Kincannon *C L Kincannon*
Director

Subject: *FDCA Program for 2010 Census Is Progressing, but Key Management and Acquisition Activities to Be Completed*
Draft Inspection Report No. OSE-17368/June 2005

This responds to your request of June 6, 2005, for comments on the above-referenced report. Overall, the U.S. Census Bureau has no major disagreements with the findings and recommendations contained in the draft report. The following section highlights specific comments concerning your review of the FDCA Program:

Comments

- We would like to note that the Census Bureau has taken actions to correct the deficiencies noted in this report. Since January 2005, we have met all of our acquisition milestones, including: (1) release of the Pre-Solicitation Notice; (2) Release of the draft Request for Proposal (RFP); (3) Completion of the “down-select” evaluation and notification of vendors; (4) Completion of responses to vendor questions; and (5) Release of the formal RFP.
- We agree there is a need to develop more project management documentation, including a “Project Management Plan.” These documents are being prepared now.
- We disagree with the statement on page 7 that this acquisition is taking longer due to the technical exchange and with the implication that this acquisition could be accomplished in five months if it were not for the technical exchange. We have compressed our overall acquisition schedule to allow for a technical exchange, which we believe is in the best interests of having a viable contractor and a working address-canvassing prototype for the dress rehearsal. For example, we released the final version of the RFP less than two months after we released the draft RFP.

- We also disagree with the statement at the bottom of the first page (and again on page 3) that “by the end of 2004, key internal acquisition milestones had been missed.” The only milestone to be completed by December 2004 was to make a decision about which field worker data collection activities would be automated and to define the scope of the contract. That milestone was met, and all subsequent acquisition milestones have also been met.