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Management Evaluation of Census 2000

FINAL REPORT

This evaluation study reports the results of research and analysis undertaken by the U.S. Census Bureau. It is part of a broad program, the Census 2000 Testing, Experimentation, and Evaluation (TXE) Program, designed to assess Census 2000 and to inform 2010 Census planning. Findings from the Census 2000 TXE Program reports are integrated into topic reports that provide context and background for broader interpretation of results.

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EXECUTIVE SUMMARY

This Report documents the effectiveness of the management approach used in the Decennial Census in each of seven areas including the management model, organizational structures and processes, the decision-making process, management information tools, staffing, external influences, and the use of contracts.[1] Each of these areas was evaluated using the questions in the Census 2000 Study Plan. The report addresses opportunities for improving the Census Bureau's effectiveness in executing its statutory responsibilities and its current ability to achieve mission results.

Performance Measures

- Key performance indicators reveal that, in certain respects, Census 2000 was the most successful U.S. decennial census ever conducted. According to senior Census Bureau officials, the most critical performance measure is Net Coverage. In Census 2000, the percent of net undercount estimate was –0.49.2 A net undercount estimate of –0.49 represents a small estimated overcount of the household population for Census 2000. Achievement of a small net coverage error that is close to zero is an important success factor given that in every census conducted prior to 2000, a positive net undercount was estimated.

- The national response rate that determined the Census 2000 Nonresponse Followup workload was 65 percent, which matched the 65 percent response rate from the 1990 Decennial Census and stemmed the decline that had been the trend over recent decades.

- The Non-Response Follow Up effort was completed ahead of schedule.

Organization and Structure

- Post 1998, the Census Bureau operated within an organization that was well structured to support its performance objectives. The decennial organization, for example, was organized by business process drawing from functional capabilities residing within the participating divisions as required. Within the decennial census business process, a single process owner, the Associate Director (AD) for Decennial Census, controlled both line and funding authority for delivering the decennial census

[1] U.S. Department of Commerce, Bureau of the Census, *Census 2000 Study Plan,* Q.1 Evaluation of the Management Processes and Systems of the 2000 Decennial Census (see Appendix F).
[2] DSSD A.C.E. Revision II Memorandum Series #PP-54

product. The overall Census Bureau organizational structure is logical, clearly defined and, for the most part, tailored toward achieving desired results.

- In many of the sub-structures and teams within the decennial organization, however, the leaders of the teams and decision-making bodies were not given or did not choose to exercise true decision-making authority. Leaders often served exclusively as facilitators and consensus builders of all the other interests of the stakeholders. Although the intent behind the creation of these organizational bodies was to push decision-making to the lowest management levels technically possible, there was no decision-making authority in place at these lower levels to support that intent. Only when all participants agreed or were present at a meeting could any issue come to conclusion; as such, decisions became watered down to what everyone in the group could agree on.[3] The problem is that committees are horribly inefficient at making decisions. A committee with a true chairperson, endowed with final decision-making or recommendation-making authority to the next level, would have had the authority to arbitrate disputes and to expedite progress on the important issues under consideration.

- Executives sometimes found themselves in situations where the interests in their directorates, divisions or teams were at odds with the interests of the greater decennial census organization within which these substructures reside. These executives at times can have conflicting responsibilities to represent the interests of their direct reports, as well as the interests of the greater Census Bureau. With any division of work resulting by the imposition of a reporting structure, these types of conflicts will occur and are natural. The Executive who resides one level up and at the apex of two or more directorates or divisions should anticipate when conflicts of interest at a level below will arise and should strongly weigh in as the point of coordination, in order to mitigate the impact on the organization of conflicts that will naturally occur.

Management Approach

- Mid-decade, the Census Bureau attempted to institute matrix management in order encourage teaming and to distribute decision-making to lower levels. This early attempt failed because the components of true matrix management were not fully implemented; there was no centralized integrating or coordinating process for census plans and operations, and decision-making mechanisms were not properly implemented. After 1998, a "centralized" management approach added strong coordination, integration and decision-making roles in the Decennial Management Division (DMD) to the teaming arrangements from the failed matrix approach. The centralized approach fulfilled the desired results of matrix management because it fit the matrixed business model of the decennial organization. The centralized management approach is the approach that best represents true matrix management

[3] Decision-making within COM was based on the following criteria: The decision shall be consistent with overall policy and/or expectations; The decision has no adverse impact on other operations (or such impact can be obviated); The decision can be accomplished within time and budget constraints.

because it features a more robust DMD on the y-axis counterbalancing and coordinating the interests of and the capabilities resident within the participating divisions on the x-axis.

- Despite the operational successes, the evaluation of the management approach revealed areas that warrant improvement. In assessing the management model, it is important to consider two external drivers that Census Bureau management must respond to (political influences and technological advances) but over which the Census Bureau does not have significant control. The operations and approach for conducting the decennial census are impacted significantly by politics because of the federal, state and local distribution of funds that are tied to census results. During the 1990s, the congressional debate over the use of a sampling strategy versus traditional enumeration strategy caused significant challenges to the Census Bureau leadership's ability to plan for Census 2000.

- As the debate over strategy continued, shoestring funding levels limited the number of staff members working on Census 2000 from the Decennial Management Division and the participating divisions; this constrained the Census Bureau's ability to generate detailed implementation plans for either a sampling or traditional enumeration approach. The funding shortfalls and an inability to maintain a core decennial staff throughout the decade also led to critical weaknesses in the decennial census knowledge base and had ramifications for many processes and procedures being executed during Census 2000.

- Most of the individuals interviewed during the course of this evaluation perceived that staff members working on the decennial census, hired late in the decade when funding came through, lacked the training and experience to understand and manage the sheer magnitude of Census 2000 operations.

Communications and Knowledge Management

- There is little record of an internal communications approach or the implementation of a formal communications structure for Census 2000. The AD for Decennial Census should ensure that the communications groups throughout the decennial organization follow a communications strategy set forth by the AD for Decennial Census, and also address each of the phases important to the development of an effective communications approach.[4] In order to ensure that the communications strategy is implemented, the AD for Decennial Census can, for example, tie the achievement of decennial communications goals with individual performance reviews.

[4] The four phases of developing an effective communications approach are as follows: 1. Evaluate the environment. 2. Establish Goals. 3. Develop the communications strategy and plan. 4. Implement the communications plans.

- A knowledge management capability to retain corporate knowledge, to support responses to external reporting requirements, and to communicate programmatic changes to decennial census participants in a timely manner would assist in improving communications and in stabilizing and maintaining the decennial census knowledge base throughout the decade.

The Management Evaluation

Although the Census 2000 centralized management approach is an appropriate approach that matches the decennial census business model, improvements could be made that would make the implementation of the approach more effective. Recommendations for improvement include:

- Clearly define and communicate to all decennial census staff the roles and responsibilities of DMD program managers.
- Develop program master plans describing operational plans earlier in the census cycle than was accomplished during census 2000
- Develop risk management plans as an integral component of census planning

1. BACKGROUND

In March of 2001, the U.S. Census Bureau retained an outside consulting firm to conduct an evaluation of the management structure, processes and tools of the 2000 decennial census. Pursuant to the contracted Statement of Work, seven areas were to be evaluated: the management model for Census 2000, organizational structures and processes, decision-making process, management information tools, staffing, external influences, and the use of contracts.[5]

The Statement of Work aggregated the seven evaluation areas into three phases for review. In the first phase, the contractor was asked to address the management model for Census 2000, the organizational structures and processes and the decision-making process. In the second phase, the contractor was directed to examine the management information tools, staffing, external influences, and the use of contracts. In the third and final phase, the contractor consolidated the findings and produced the final Management Evaluation Report.

The Management Evaluation Steering Committee directed the project team to evaluate the management approach in terms of how well the management plan worked. The Steering Committee determined that the management plan for the evaluation would refer to the *Roles and Responsibilities* document created in 1998 to describe the management approach that would be used to coordinate the decennial census. This document loosely defined the areas of responsibilities assumed by the Decennial Management Division, Program Managers, the Participating Divisions, the Census 2000 Working Groups (Census Operational Managers, Decennial Division Chiefs Steering Committee), and decision-making processes (Issue Resolution/Change Control).

[5] U.S. Department of Commerce, Bureau of the Census, *Census 2000 Study Plan,* Q.1 Evaluation of the Management Processes and Systems of the 2000 Decennial Census (see Appendix F).

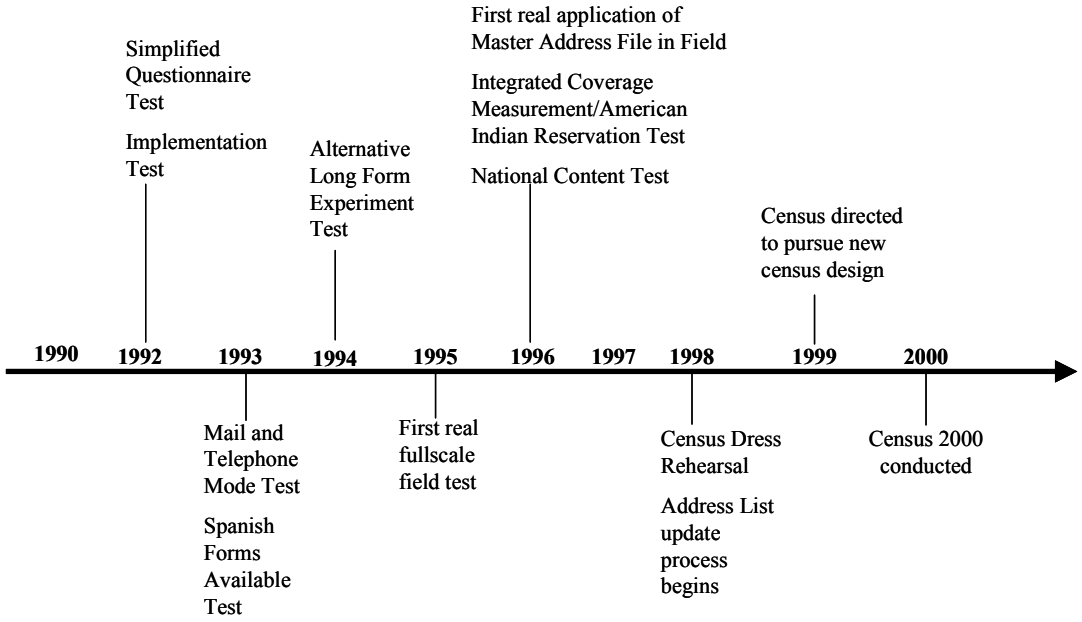
2. METHODOLOGY

In order to properly evaluate the management approach of the decennial census, the contractor began the assessment by gaining a clear understanding of the baseline operations currently in place at the U.S. Census Bureau. This provided the contractor with a "common understanding" of how the Census Bureau is organized, the core products and services offered, and the supporting systems architecture. This common understanding is sometimes referred to as the "as is" baseline or the current ways of working. The contractor's understanding of the external and internal environment formed the foundation upon which the detailed approach for assessing organizational and management performance was based.

Many of the tools the contractor used to understand an organization's management structure were taken from the contractor's business process reengineering methodology; for this project specifically, the contractor selected business modeling and process analysis. By comparing the vision in the Census Bureau plan against current operations, the contractor sought to identify gaps that may help to identify areas where the Census Bureau can improve its management approach.

The contractor created a baseline of the decennial census by taking a look at the core business processes, the organization and the management structures that were in place to support the operations mentioned in the timeline in Figure 1. The timeline describes the events that occurred during the 12-year cycle leading up to Census 2000.[6]

Figure 1: Operational Timeline



[6] U.S. Department of Commerce, Bureau of the Census, Decennial Management Division, *Updated Summary: Census 2000 Operational Plan,* Feb. 1999.

2.1 Develop the Baseline Approach for the Decennial Census

The baseline management approach and the supporting organization form key elements in the contractor's understanding of the conduct of Census 2000. The creation of the baseline was largely based on a thorough review of documentation provided by the Decennial Management Division (DMD) and meetings with key members of the Management Evaluation Steering Committee (the Steering Committee). The Steering Committee was comprised of managers from the DMD, the Decennial Systems and Contracts Management Office (DSCMO), and the Field Division (FLD).

To initially understand the organizational structure and management approach, the contractor reviewed the delegations of authority and funding strategies, areas of responsibility, reporting lines of accountability, and resourcing capacity throughout the decennial census decade. This understanding was critical to evaluating the management approach used during the implementation of Census 2000.

The following steps were taken to create a baseline of the management approach and organizational structure:

Step 1: The contractor reviewed documentation supplied by the Steering Committee, in addition to external information available on the Internet from the Department of Commerce, the General Accounting Office, census oversight committees, Title 13 of the U.S. Code and the U.S. Constitution. The primary internal documents used for the initial review were the *Census 2000 Operational Plan* and the *Roles and Responsibilities of Census 2000 Participants* document. The *Census 2000 Operational Plan* was written by the staff members of the DMD and it describes the operations of the decennial census. The *Roles and Responsibilities* document was written by the DMD in 1998 and describes the baseline management approach determined for Census 2000.

Step 2: From this initial documentation, the contractor drafted high-level organization charts and business process models, which were reviewed by the Steering Committee. This was done to ensure that the team correctly understood the operations and management approach as outlined in the *Roles and Responsibilities* and *Census Operations* documents. During the review, the authority, accountability, and responsibility relationships, as well as the capacity of resources, were clarified to enable the contractor to better understand the management approach. The contractor incorporated the feedback from the Steering Committee into the models and clarified interpretation of the management approach described in the initial documents.

Step 3: The contractor used this knowledge to develop the list of interview questions for Census Bureau management.[7] The questions were developed to focus discussions on key issues identified for the evaluation by the Q.1 Study Plan.[8]

[7] Bureau of the Census Management Evaluation, *Interview Guide*, September 2001 (See Appendix E).

Step 4: The contractor conducted a limited benchmarking activity in an effort to gain some objectivity on the service delivery mechanisms of the U.S. Census Bureau. To obtain an understanding of how other similar organizations conduct business, the contractor spoke with members of census organizations in other countries with similar processes to the U.S Census Bureau.

2.2 Develop Evaluation Dimensions

Once the team had a basic understanding of the management approach, the contractor worked with the Steering Committee to identify dimensions where the management approach was to be evaluated.[9] These areas included:

Political Environment: This section discusses how the external stakeholders, such as the Congress, the General Accounting Office (GAO), the Department of Commerce (DoC), the Office of Management and Budget (OMB), the Census Monitoring Board (CMB), and the Administration impacted the implementation of Census 2000. It also includes some advisory groups and the relationships that the Census Bureau had with them.

Census Environment: This section discusses the internal environment at the Census Bureau during the decennial census; more specifically, internal forces within the Census Bureau that drive change and how the Census Bureau's atmosphere changes during the decennial census year as compared to other years. Although not specifically requested in the report, the project team found that ***Funding, Staffing***[10] and ***Leadership*** were areas of particular importance to the staff members and had significant implications for the management of Census 2000. For those reasons, the contractor included a discussion of those comments in this report. ***Human Resources Management*** issues also arose and are discussed.

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[8] U.S. Department of Commerce, Bureau of the Census, *Census 2000 Study Plan,* Q.1 Evaluation of the Management Processes and Systems of the 2000 Decennial Census (see Appendix F).

[9] As a baseline for the evaluation criteria, the contractor began with the six key areas of integrated organization design as defined by their Organizational Design Methodology. The areas of the contractor methodology are as follows: 1. *Roles and Responsibilities:* The assignment of responsibility for performing specified activities to specific groups or individuals, such as, key organization roles and interfaces and accountabilities. 2. *Organizational Structure and Processes:* The definition of work activity groupings, reporting relationships, levels and spans, such as, functional, process, and product/ channel/customer grouping. 3. *Accountability and Decision-making:* The assignment of accountability for results of specific activities and the process for defining who is involved in and approves key decisions, such as, governance principles. 4. *Work Group Design:* The combination of related jobs and determination of resources needed to meet the organizational requirements, such as, cross functional teams, virtual teams, and integrating mechanisms. 5. *Job Design:* The assignment of groups of related tasks/activities and procedures to specific jobs, such as, detailed job specification. 6. *Skills & Behavior Development:* The development of skill sets and behaviors required to support new processes and leverage new technology at the individual and group level, such as, skills, knowledge, and behavior.

[10] This section refers to matters of recruiting and retention, promotion and terms of employment, succession planning and career development. We discovered that general concerns around staffing and human resources were significant to the staff and relevant to the discussion of the other three areas.

Census Management Model: This section discusses the approaches that the DMD used to manage the conduct of Census 2000. Specifically this refers to the matrix and centralized approaches used during the decade in managing across all of the program areas and participating divisions. ***Decision-making*** and ***Planning*** are also specifically addressed in this section.

The evaluation dimensions also included specific performance related questions from the *Census 2000 Study Plan*[11] that formed the basis for the contract to evaluate the management approach of Census 2000. Throughout this document, there are text boxes with questions from the Study Plan that pertain to a particular section under discussion. Some subject areas emerged as a significant concern from the interviewees as the project progressed and, as such, are not referenced by any specific study plan question.

2.3 Evaluate the Management Approach

The contractor evaluated the management approach by conducting interviews with key Census Bureau staff. A total of 52 interviews were conducted with Census Bureau personnel including 9 Executive Staff, 13 Division Chiefs (including Regional Directors), 18 Assistant Division Chiefs, and 12 Branch Chiefs. The interview list[12] included staff members from the following areas: DMD, DSCMO, DSSD, GEO, Planning, Research, and Evaluation Division (PRED), Housing and Household Economic Statistics (HHES), Population Division (POP), Census 2000 Publicity Office (C2PO), Field Division (FLD), and two Regional Offices. Fifty of the fifty-two interviewees had prior decennial census experience and the group collectively had over 900 years of experience with the Census Bureau.

2.4 Perform Qualitative Analysis on the Interview Data

With the interviews completed, the contractor developed an approach to organizing the interview information gathered from those who worked on Census 2000. To assist the contractor in analyzing the data, the contractor used the Non-Numerical Unstructured Data Indexing Searching and Theorizing (NUD*IST) software developed by Qualitative Solutions and Research (QSR). The contractor wrote a summary of each of the 52 interviews and entered specific comments from the text, called "text units, " one by one into the NUD*IST software. The software allows the analyst to group and sort common text units into a tree structure according to common themes, as in the example below.

1. Census Management Model
   - 1.1 Organizational Structure
     - 1.1.1 Strengths
     - 1.1.2 Weaknesses
     - 1.1.3 Other observations

[11] U.S. Department of Commerce, Bureau of the Census, *Census 2000 Study Plan,* Q.1 Evaluation of the Management Processes and Systems of the 2000 Decennial Census (see Appendix F).
[12] Interviewees for Management Evaluation of the Decennial Census (See Appendix C).

By using the software, the contractor was able to observe the development of certain themes and findings as the interviews progressed. The contractor structured the software tree according to the evaluation criteria[13] and initially coded the text units into strengths, weaknesses, and general observations. By taking quotes from the different interviews and looking at particular themes, the contractor was able to cross analyze the data from all of the interviews in order to identify trends as they emerged.[14]

2.5 Interpret the Results

The final interview results can be found in Appendix B. Each line on the NUD*IST tree represents a particular category. Each contains numbers associated with "N", "C", "n", and "c." "N" refers to the total number of individuals commenting on a general subject area. "C" refers to the total number of comments made on that general subject area. "n" refers to the number of individuals commenting on a specific issue within a general subject area. "c" refers to the number of comments on this specific issue within the general subject area.

"N" = Number of Individuals Commenting on a General Subject
"C" = Comments on a General Subject
"n" = Number of Individuals Commenting on a Specific Issue within a General Subject
"c" = Comments on a Specific Issue within a General Subject

Example:

Leadership (referring to the Executive Staff) (N=44, C=169) includes comments on the following: the clarity of direction (n=33, c=65), cohesiveness of the leadership team (n=18, c=33), leadership changes (n=18, c=30), relationship of leaders with external stakeholders (n=14, c=25), and how the decennial census relates to other Census Bureau products (n=11, c=17).

In the results above, for example, forty-four people (N=44) made 169 comments (C=169) about leadership. Of the people who commented on leadership, n=33 commented on the clarity of direction with a total of 65 comments, n=18 commented on the strength and cohesiveness of the leadership team with c=30 comments, n=18 commented on leadership changes with a total of c=30 comments, n=14 commented on the relationship of leaders with stakeholders with a total of n=25 comments, and n=11 commented on how the decennial relates to other Census Bureau products with a total of c=17 comments.

In sum, the contractor interpreted the information collected in the interviews through the lenses of management theory and experience from previous management reviews in order to evaluate

[13] Criteria for Evaluating the Management Approach (Appendix A).
[14] Step 1: We developed an indexing system to establish a structure for the qualitative interview data. The indexing structure allowed us to code the interview text with titles, memos, and appropriate references. This allowed the content to be investigated in many different ways and for the structure to be rearranged. Step 2: We searched the texts for themes and created links to the different ideas that were presented by the interviewees. This allowed us to further develop and test our theories regarding Census 2000 management approach. The NUD*IST software also enabled our team to synthesize the project results and relate similar comments.

the decennial census management practices. The initial interview questionnaire was designed to uncover symptoms that have their root causes in certain management practices. Drawing on management theory and the contractor's management review experience, the contractor then asked follow-up questions designed to diagnose and confirm the root causes behind the symptoms of the management issues being discussed. With 52 interviews, the project team handled over 1,700 separate text units to determine the final results. The rest of this document discusses the findings and analysis that the contractor derived from the data.

2.6 Assure Quality

In order to assure the integrity of the information collected in the evaluation process, and further assure that the project remained in line with Census Bureau goals and objectives, the contractor employed a quality assurance plan that incorporated various components designed to monitor progress and maintain a standard of quality in project deliverables. The quality assurance plan included development and maintenance of a detailed project plan. The project plan was constructed using MS Project and was continually updated throughout the life of the project to reflect changes in schedule, deliverable due dates, project objectives and goals.

Another component employed was the implementation of the stakeholder quality process. The stakeholder quality review process was a mechanism for verifying facts and identifying and monitoring the expectations of the key stakeholders throughout the project. At the outset of the project, the contractor reaffirmed the mission, scope and objectives of the project, and obtained buy-in from the Census Bureau stakeholders. This technique was used to assure that requirements were well defined and understood, that Census Bureau expectations were being met, and that contributions were made that positively impacted the Census Bureau organization.

Where it was possible to identify information that would substantiate individual observations, the contractor sought verifiable sources (e.g., funding schedules for U.S. and other national censuses, management plans, departmental directives, organizational charts, leadership communications, personnel information, etc.). When valid sources of information were unavailable, the contractor noted that finding when it was relevant to do so.

Lastly, an important mechanism in the quality assurance plan was the submission of monthly status reports. These reports assured that the Census Bureau was kept informed of progress, budget status, and schedule modifications. The status reports also provided consistent documentation of the critical issues that arose during the project that may have impacted project outcomes.

3. LIMITATIONS

It is important to keep in mind the following caveats as they relate to the conduct of the interviews and their impact on the final results:

- The report follows the format as requested in the statement of work and responds directly to the questions outlined in the Study Plan.

- When the contractor was engaged to perform the management evaluation, the assumption was that each component to be reviewed would have had a baseline management approach plan from which to compare planned versus actual implementation. Once the interviews were completed, the contractor concluded that some components had no baseline plan from which to evaluate. In such circumstances, the contractor suggested an appropriate approach or described the components thereof, and how they might be applied to the Census Bureau's situation.

- The interviews were conducted using questions from an *Interview Guide*[15] developed in cooperation with the members of the Census Bureau Project Steering Committee. The interviews lasted from 60 minutes to 90 minutes. The interviewees had varying levels of exposure to the issue areas mentioned in the *Interview Guide*, and they generally commented on areas with which they had direct knowledge or experience. The interviewees were provided the opportunity to discuss the issues they felt were most important.

- Because the interviewees were not required to answer all of the questions in the *Interview Guide*,[16] each of the issue areas will have comments from less than 52 interviewees.

- The contractor's knowledge base improved as the interview schedule progressed. The contractor was then able to ask more probing and in-depth follow-up questions in certain areas. Consequently, some of the more detailed questions asked later in the interview schedule generated fewer total comments because fewer interviewees were given a chance to respond to the more detailed questions. It was up to the consulting team to link the more detailed responses to the general findings they supported. It is important to recognize, therefore, that a relatively low number of comments does not diminish the validity or importance of some of the responses.

- There was no attempt to stratify the comments from the interviewees, since all the counts and comments were treated equally, independent of organizational unit, experience, or other differences. The interviews were conducted using questions from an *Interview Guide*[17] developed in cooperation with the members of the Steering Committee.

[15] Ibid.
[16] Bureau of the Census Management Evaluation, *Interview Guide*, September 2001 (see Appendix D).
[17] Ibid.

- For the contracting component of the management evaluation, the contractor analyzed data from 16 interviews; therefore, any formal statistical stratification or analysis of the results becomes difficult. From the initial statement of work, the contractor had planned to interview only acquisition and contract management personnel from five federal agencies. Given the broader context of the review, the contractor broadened the interviewee roster to add staff from program management and include one additional federal agency.

- In some cases, plans and documentation were not available to the contractor for use in identifying views and opinions that could not be factually supported. The contractor did require review from the members of the Census Bureau Steering Committee in order to identify perceptions that were inconsistent with known facts or events.

4. POLITICAL ENVIRONMENT

4.1 Background

While the conduct of the decennial census is authorized by the U.S. Constitution and governed by statutes outlined in Title 13 of the U.S. Code, the legal challenges to the census design and the politics associated with Congressional reapportionment and redistricting had a definite impact on the conduct of Census 2000. Public Law 94-521 authorizes the Secretary of Commerce to perform the decennial census and allows him or her to delegate the functions, duties, and authority needed to perform the tasks to officers and employees of the Department of Commerce.[18] The U.S. Constitution authorizes Congress to direct an "actual enumeration" of the American public every ten years to provide a basis for apportioning congressional representation among the States.[19]

The U.S. Constitution sets the boundaries for the conduct of the census in the broadest sense. It provides insight into the basic reasons for the political pressure on the Census Bureau during the planning and execution of Census 2000. The results of the decennial census are used to determine, at a minimum, three important political outcomes:

- the apportionment of political representation, through congressional apportionment[20];
- the apportionment of federal, state, and local funding;[21] and
- the determination of state legislative districts.

The outcome of the decennial census, therefore, contributes to the determination of the political landscape for the next ten years. The impact of politics in the decennial census should therefore not be a surprise; rather it should be expected and even planned for.

4.2 The Sampling Debate

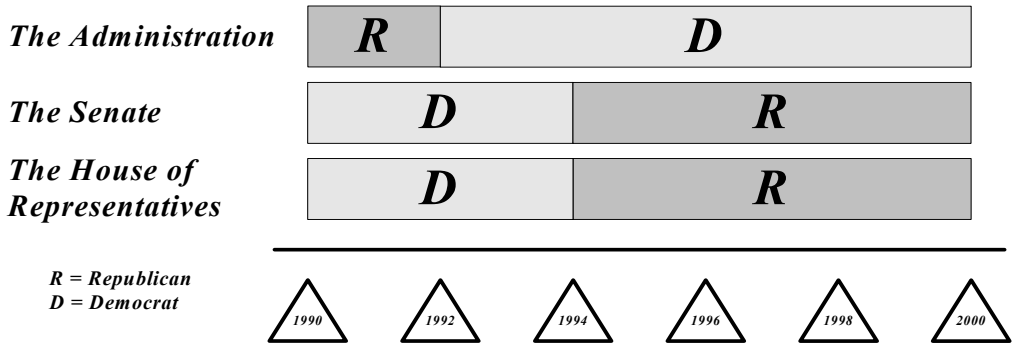
According to some of the interviewees, the 1990 census had been portrayed (rightly or wrongly) as a failure, both in terms of cost and the accuracy of the coverage. In the early part of the decade, the Census Bureau announced a plan to use statistical sampling to address the growing problem of "undercounting" some identifiable groups, including certain minorities, children and

[18] 13 U.S.C. § 1; PL 94-521, § 3(a), Oct. 17, 1976, 90 Stat. 2459.
[19] U.S. Const. art. I, § 2, cl. 3.
[20] Article 1, Section 2, Clause 3 of the U.S. Constitution states that "Representatives and direct taxes shall be apportioned among the several States which may be included within this Union, according to their respective numbers, which shall be determined by adding to the whole number of free persons, including those bound to service for a term of years." And it authorizes Congress to direct an "actual enumeration" of the American public every 10 years to provide a basis for apportioning congressional representation among the States.
[21] According to Census Bureau interviewees, the Voting Rights Act of 1965, enacted as part of a program of civil rights reform, served to increase the political importance of the decennial census because it provided the statistics upon which the future distribution of federal funds would be based.

renters. In an effort to address growing concerns about the undercount in the census, Congress passed the Decennial Census Improvement Act of 1991, which instructed the Secretary to contract with the National Academy of Sciences (the Academy) to study the "means by which the Government could achieve the most accurate population count possible."[22] Among the issues the Academy was directed to consider were "the appropriateness of using sampling methods, in combination with basic data-collection techniques or otherwise, in the acquisition or refinement of population data."[23]

The political landscape surrounding the Census Bureau in the mid to late 1990s was unusual because of conflicting views of the Democratic Administration and the Republican-controlled House of Representatives over the use of sampling. In 1995, the Republicans took control of the House of Representatives (see Figure 2) while the Administration remained in Democratic hands. The competing interests of these two parties formed the basis for a number of legislative initiatives and court challenges in the debate over the use of statistical sampling for Census 2000.

Figure 2: Party Control of the Administration, Senate, and House of Representatives



In November of 1997, the U.S. Congress passed Public Law 105-119 stating that the U.S. Constitution calls for an 'actual enumeration of the population' and that the use of statistical sampling to determine the population for congressional apportionment purposes could "risk an inaccurate, invalid and unconstitutional census."[24] The Census Bureau (in cooperation with the direction from the DoC) then pursued a "dual path" strategy for the Census 2000 Dress Rehearsal; i.e., to rehearse both a traditional census approach and a sampling approach.

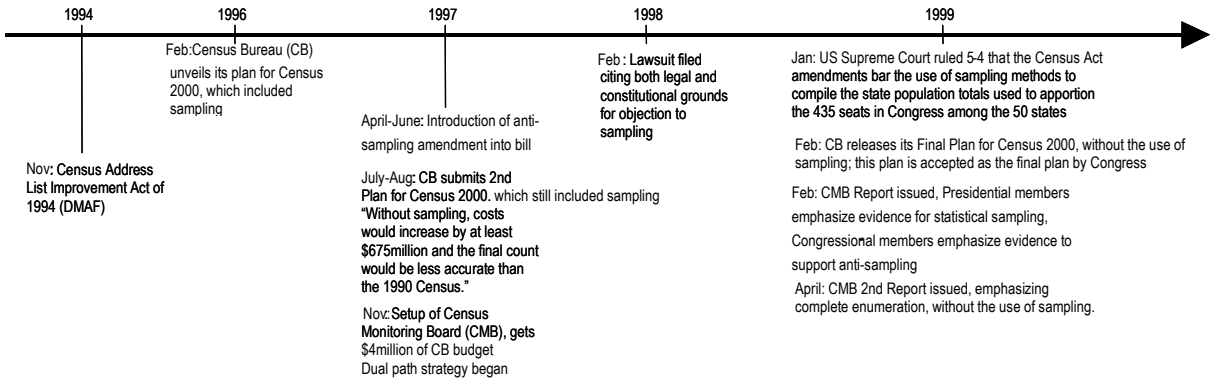
[22] §2(a)(1), 105 Stat. 635, note following 13 U.S.C. § 141

[23] From Justice O'Connor's opinion, which was the opinion of the court, this information is found in the Supreme Court's opinion on the *Department of Commerce v. United State House of Representatives, 525 U.S. 316 (1999).* *"*Two of the three panels established by the Academy pursuant to this Act concluded that 'differential undercount cannot be reduced to acceptable levels at acceptable costs without the use of integrated coverage measurement,' a statistical sampling procedure that adjusts census results to account for undercount in the initial enumeration," Census 2000 Report 7-8. All three panels recommended including integrated coverage measurement in the 2000 census, *id.,* at 29. See National Research Council, Preparing for the 2000 census: Interim Report II (A. White & K. Rust eds. 1997) (report of Panel to Evaluate Alternative Census Methodologies); Modernizing the U.S. Census, *supra* (report of Panel on Census Requirements in the Year 2000 and Beyond); U.S. Dept. of Commerce, Bureau of the Census, Census 2000 Operational Plan (1997).

[24] Public Law 105-119, title II, Sec. 209, November 26, 1997, 111 Statute 2480.

In early 1998, two sets of plaintiffs filed suits challenging the legality and constitutionality of the census sampling plan. The courts ruled that the sampling approach violated Title 13 of the U.S. Code and granted the plaintiffs' motion for summary judgment. On direct appeal, the Supreme Court consolidated the cases for oral argument.[25]

Figure 3: Timeline of Key Legislative/Judicial Events



In January 1999, the Supreme Court decided that the sampling approach was inconsistent with the direction to enumerate in Title 13 of the U.S. Code. With 15 months until April 1, 2000, or "Census Day," the Census Bureau had to develop and implement a full-scale plan to take the census via the traditional enumeration approach.

4.3 All Levels of Decennial Census Staff Felt the Impact of the External Oversight

From the interviews with Census Bureau staff it was clear that they understood the importance of politics and the role it plays in influencing the conduct of the decennial census. Of the 52 interviews conducted, 41 people commented on the political oversight with 116 individual comments (N=41, C=116). Some of those who had participated in three or more censuses said that they had experienced an increasing politicization of the decennial census in recent decades. The role that politics played was made even more visible with the sampling debate. There were a relatively high volume of comments on the sampling issue and the role of Congress (n=19) and the Administration (n=5). These are important findings because they demonstrate the degree to which oversight requirements penetrated into the organization and the potential influence of politics on executives and managers of Census 2000 in their management approach.

It was clear that the interviewees understood the relationship between political agendas and the suggested approach to conducting a decennial census. The impact of this political stalemate on the management of the decennial census was threefold:

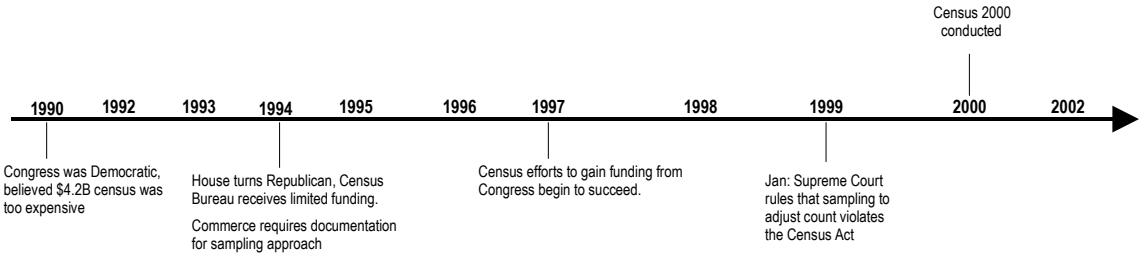
[25] *Department of Commerce v. United States House of Representatives*, 525 U. S. 316 (1999)

4.3.1 The political involvement intensified as partisan friction increased

The impact of politics on the management of Census 2000 was clear. Early in the decade, the Census Bureau received instruction from the Administration (via the Department of Commerce) to prepare a new sampling approach rather than the traditional enumeration approach. Eighteen individuals perceived that poor relationships with the Department of Commerce impacted the amount of oversight activity and inquiries regarding the census (n=18). By mid-decade, congressional appropriators made it known that they were opposed to the sampling approach. Six individuals perceived that Congress held back funds mid-decade because the Members preferred the traditional enumeration approach to the sampling approach (n=6).

Obtaining funding for important planning activities was problematical during this period. The opposition from Congress took place at a crucial time in the program lifecycle. It is important to remember that the entire federal government was following an initiative to downsize in the early to mid 1990s. During this time, the Census Bureau was to complete full program planning and two rounds of testing, and should have been developing plans for the Census 2000 Dress Rehearsal. There was the perception among interviewees that there was little funding mid-decade (n=17), that appropriators held funding back at crucial times in the program (n=6), and that they released funds later when the Census Bureau agreed to a dual track planning approach for FY98 (n=10). There is no direct evidence for this, although a comparison of the funding profiles does indicate a relative lack of funding during the sampling planning as opposed to later in the decade when a dual track program was pursued (see Tables 1 and 2 in the Funding section.)

Figure 4: External Decisions Timeline



4.3.2 The political environment impacted internal operations

Many staff perceived that the oversight activity and changes in strategy from Congress were overwhelming from the start of the decade. Later in the decade, the Department of Commerce, the Census Monitoring Board, the General Accounting Office, the Inspector General, and other advisory or state and local interest groups all began to take their own interest in oversight. Staff members perceived that the oversight activities of the Monitoring Board, the Department of Commerce, the General Accounting Office and the Inspector General (n=22) were intrusive.

Broadly, it was felt that the oversight groups were more critical as opposed to helpful in nature. The decennial census participants also perceived that they were impaired by the draw on resources necessary to respond to the volume of oversight requests, particularly toward the end of the decade (n=19).

The political oversight also reduced the level of autonomy the decennial census participants had to plan, mobilize, and execute Census 2000. Because staff resources were already stretched thin, little attention or effort could be afforded to contingency planning, exposing Census 2000 to potentially severe risks, with little action taken to mitigate them. The decennial census planning was based solely on the sampling approach until FY98 when the dual track planning approach began.

By that point, management was left in the awkward position of not having enough funding to prepare one quality plan, let alone two. Though the decision to plan for a dual path was made in 1997, the approach for Census 2000 was not formally determined until the Supreme Court ruled in January of 1999, with 15 months left until Census Day.[26]

4.3.3 Toward the end of the decade, the Census Bureau Executive Staff managed the external environment well

Director Ken Prewitt and Deputy Director Bill Barron assumed their leadership positions in the late 1990s, and played roles that were instrumental in improving relationships with external stakeholders. Both were viewed as being extremely good at dealing with their constituencies, specifically the Department of Commerce, Congress and other oversight groups. (n=9). The Director was cited as having had a management style that invited people in to the Census 2000 process. This was seen as important, because the Census Bureau had previously come across as distant, which may have negatively affected the relationships with stakeholders. Both Prewitt and Barron focused on communicating with external oversight groups, while their management team dealt with operational issues to ensure that the oversight requests did not impair the progress of Census 2000 operations.

For the 2010 Census, however, it will be imperative that the Census Bureau be forward thinking from the start by proactively communicating with all of its constituents, rather than by responding reactively to requests for information and involvement in the decennial process. Although progress was made in this area under the Prewitt/Barron regime, the Census Bureau was not organized to do this earlier in the decade.[27]

[26] April 1, 2000
[27] Communications will be addressed more specifically in a later section of this report.

5. FUNDING

The decennial census requires a tremendous national effort to plan, design, mobilize, and execute. Census 2000 required a workforce of over 900,000 employees at its peak and cost nearly $6.375 billion. It is clear from the interviews that both the level and strategic targeting of funding were essential to the completion of Census 2000. Thirty-seven of the interviewees made a total of 76 comments with respect to funding and its impact on Census 2000 (N=37, C=76.) The timing of the acquisition of funds, where these funds were applied, and the total value of funding all played an important part in the management approach to Census 2000.

5.1 Generous Funding or High Cost?

Most interviewees commenting on the level of funding took one of two positions. These viewpoints correlated to the interviewees' general perspective on the successes (or failings) of Census 2000:

> The first viewpoint was that Census 2000 was generally underfunded until the decision was made regarding sampling (n=8, c=9). In fact, Census 2000 was the costliest decennial census ever in terms of the absolute cost and the relative measure of cost per capita. The primary reasons for the generous funding levels late in the decade were the need to change the design of the census from sampling to traditional census taking methods and the need to mitigate the risk of program failure. It was perceived that by the end of the decade, whatever was asked for was generally given and that Census 2000 had enough money for what was needed.
>
> The second viewpoint was that the decennial census was well funded during Census 2000 operational years, particularly the new initiatives like front-loading the recruitment of field resources, securing higher than minimum wages for enumerators, and the support for paid advertising and outsourcing.

In addition to the qualitative data from the interviews, the contractor collected funding data from the 1990 Census, Census 2000,[28] and from other countries. Figure 5 shows the funding per person for the U.S. and three countries and the cost of the national census as a percentage of Gross Domestic Product (GDP). The contractor used these broad measures to give an indication of the comparative order of magnitude of these funding measures between countries.

[28] Contractor, Bureau of the Census Management Evaluation, "Compilation of Funding Figures for Census in US, UK, Australia, and Canada," Dec. 2001, p. 1. U.S. Census Funding Figures provided by DMD budget staff.

Figure 5: The Relative Funding Per Person and as a Percentage of National GDP (Adjusted for Inflation)[29]

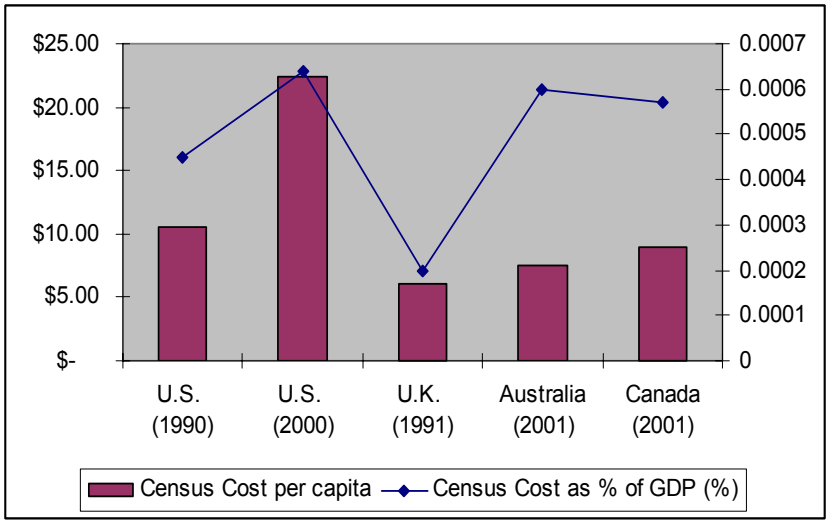
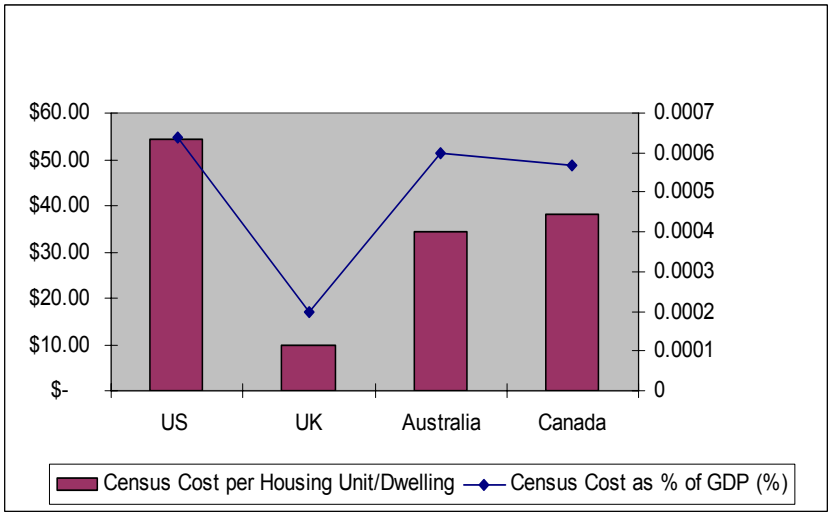


Figure 6: The Relative Funding Per Housing Unit/Dwelling[30] and as a Percentage of National GDP (Adjusted for Inflation)[31]



[29] Australia - Source: Tim Skinner (Deputy Statistician) and John Struik (Head, Population Census, Demography and Geography Programs), UK - Source: Graham Jones (Director Census) and Linda Street, Canada - Source: Benoit Laroche (Census 2001 Manager) and Anne Coulter (Chief, Planning & Integration, Census Program).

[30] The countries included in this comparison use slightly different terminologies to label their respective data. The term 'housing unit' used by the U.S. Census Bureau to represent a house, apartment, mobile home, group of rooms, or single room that is occupied, or if vacant intended for occupancy, as separate living quarters- is equivalent to the term 'dwelling', used in the U.K., Australia, and Canada.

[31] Australia - Source: Tim Skinner (Deputy Statistician) and John Struik (Head, Population Census, Demography and Geography Programs), UK - Source: Graham Jones (Director Census) and Linda Street, Canada - Source: Benoit Laroche (Census 2001 Manager) and Anne Coulter (Chief, Planning & Integration, Census Program).

Clearly, each country adopts a different approach to conducting their national censuses and the underlying characteristics and attributes of that country's demographics are different. It is important to recognize that Australia and Canada have five-year census cycles and the U.S. and the United Kingdom (U.K.) follow a ten-year cycle. Census 2000 had an improved response rate as compared to previous censuses and there are costs associated with improving data quality. Comparing the 1990 U.S. per capita spending with the figures from 2000, however, the contractor identified a significant difference between the costs of the two U.S. censuses. The per capita cost went from $10.52 in 1990 to $22.35 in 2000, a 112 percent increase.[32] In comparing the per housing unit (or dwelling) costs among countries, it is also evident that the relative funding, $54.34 per housing unit was significantly higher for the U.S.[33] The data appear to support the views and opinions of the interviewees that Census 2000 was both comparatively well funded in the operational years and expensive.[34]

5.2 The Program Funding Lifecycle

As the contractor began to develop the analytical framework to examine funding it was important to establish two working principles. The first was that the completion of a decennial census followed the typical program lifecycle stages. A program may be defined as a portfolio of projects that are managed in a coordinated way to deliver planned outcomes, events, and products. The program lifecycle typically includes the following stages:

Strategic analysis and program definition, including understanding the need for the program, and developing the high-level scope of the effort;

Organizational Structuring and Management Approach, by clearly aligning delegations of authority with areas of responsibility, by creating reporting and accountability mechanisms tied to consequences, and by securing adequate staff and other resources that provide the capacity to get the design and planning work done;

Design and planning, including developing the conceptual framework and plans, and building more detailed project plans and work breakdown structures;

Mobilization, through the acquisition and deployment of program resources to complete the program;

Implementation, delivering the program through to completion; and

[32] Census Cost per capita = Total Census Cost / Total Population. Total cost for the U.S. Census 2000 is $6.375 billion (includes estimated costs for FY2003) and the total U.S. population (including Puerto Rico) of 285,230,516 million from U.S. Census Bureau website, Table DP-1. Profile of General Demographic Characteristics for the United States: 2000. Population determinations for the U.K. and Australia were taken from the World Factbook, July 2001.

[33] Census Cost per Housing Unit/Dwelling = Total Census Cost/Total number of housing units/dwellings. Housing unit/dwelling data was taken from the World Factbook 2000, Statistics Canada from the 2001 Census, the Australian Bureau of Statistics 2001, and www.housing.odpm.gov.uk 2000.

[34] Census cost and population figures represent the 50 states, the District of Columbia, and Puerto Rico.

Evaluation, to understand the benefits and lessons learned from the program.

The second working principle was that the funding requirements should match the cost profile of the program lifecycle. In the analysis the contractor drew on comparative data from other countries to understand potential shortfalls or excesses in funding.

Table 1[35]: Annual Census Funding Percentages by Country

Year	US 2000 10 Year	UK 1991 10 Year	Australia 2001 5 Year	Canada 2001 5 Year
t-4	0.9%	1.2%	1.9%	
t-3	1.5%	2.6%	5.2%	8.8%
t-2	6.7%	8.0%	8.0%	7.6%
t-1	18.9%	23.9%	23.6%	28.0%
t	71.9%	64.2%	61.3%	55.5%

Table 1 shows the percentage of funds spent annually during the five years leading up to and including census year for the United States, the United Kingdom, Australia, and Canada. Given that all censuses must deliver census results by a designated date and assuming a time t = Census Day, the contractor compared the cumulative funding percentages for the years from t-4 to t for all of the censuses.

Table 2[36]: Cumulative Census Funding Percentages by Country

Year	US 2000 10 Year	UK 1991 10 Year	UK % over US	Australia 2001 5 Year	Australia (% over US)	Canada 2001 5 Year	Canada (% over US)
t-4	0.9%	1.2%	33%	1.9%	111%		
t-3	2.4%	3.9%	63%	7.1%	196%	8.8%	267%
t-2	9.2%	11.8%	28%	15.1%	64%	16.4%	78%
t-1	28.1%	35.8%	27%	38.7%	38%	44.5%	58%
t	100.0%	100.0%		100.0%		100.0%	

Comparing the accumulation of funding, the contractor identified a correlation between funding levels earlier in the census cycle and the amount spent during census year. The data in Table 2 show that the other countries spent comparatively more of their total budget earlier in the cycle than did the United States. Starting in year t-4, the UK had spent over thirty percent more than the U.S., while Australia spent over one hundred percent more. At year t-3, the United Kingdom, Australia, and Canada had all spent between sixty and 270 percent more than the United States. By t-2, the UK, Australia, and Canada spent from twenty-five to seventy percent more than the U.S. At year t-1 they spent approximately twenty-five to eighty percent more than the United States. In contrast, during census year, the United States spent seventy percent of the funding, twelve to thirty percent more than the United Kingdom, Australia, or Canada. This

[35] Calculations made by contractor.
[36] Ibid.

information, from a limited but comparable sample, points to a direct correlation; the higher the percentage of total funding spent in the years t-4 to t-1, the less percentage of funding spent during census year.

The benchmarking interviews revealed that funding for the U.K., Canada, and Australia was not a prominent management issue, as it was in the United States. The U.S. staff perceived that funding was a significant issue and indicated that the lack of adequate funding had an impact on operations.

5.3 External and Internal Controls Over Funding

Funding was used as a lever both externally and internally. From an external standpoint, funding was used as a means to influence the extent by which the Census Bureau could adopt sampling and also the extent to which the Census Bureau would be successful during enumeration. It is important to note that although some research and development (R&D) efforts were funded very early in the decade, R&D does not replace the need for census planning, which the interviewees perceived to be underfunded during the middle of the decade. From an internal standpoint, the Census Bureau itself exerted control over the targeting and allocation of funding to influence how things got done.

6. STAFFING

Fifty of the fifty-two interviewees commented on challenges with headquarters staffing during Census 2000 (N=50). In the course of this evaluation, the contracted project team identified the following concerns regarding decennial headquarters staffing: 1) delays in funding resulted in inadequate numbers of skilled and experienced resources and a critical erosion of the knowledge base, and 2) recruitment and retention challenges exacerbated the problem. One interviewee commented that he considered the decennial human resources situation to be extremely "fragile."

> Did we have enough people at the right time? Were various functions or subprojects adequately staffed? What is the appropriate benchmark to determine an adequate staff level? By functional responsibility, how early does an office need to increase staff to be able to meet the demands of a Decennial Census?

6.1 Inadequate Levels of Staffing and Experience Eroded the Knowledge Base

During Census 2000 many managers commented that they did not have the right number of people needed to successfully complete tasks and that resources were stretched too thin (n=25). Of the people who commented on staffing, 15 felt strongly about the need to have people in place early in the decade (n=15). Some people mentioned the importance of maintaining a core decennial staff within the Decennial Directorate throughout the decade (n=8), while others felt that a core infrastructure should be in place by 2003 (n=10).

Thirty-six commented that the personnel working on the decennial census lacked prior decennial experience (n=36) and thirteen mentioned that the Executive Staff as a whole had little previous decennial experience (n=13). Sixteen remarked that many people lacked the proper skill set and experience to perform the duties associated with their position (n=16).

6.2 Recruitment and Retention Contributed to the Problem

Late in the decade, the Census Bureau finally had the funding resources to staff the Decennial Census Directorate. When the leadership was ready to staff the directorate, they tried to hire people from divisions outside the decennial organization through transfers and temporary promotions. Many people who had worked on previous decennial censuses did not want to return for Census 2000.[37] As such, many of those hired into the DMD from the divisions were inexperienced with the decennial census. In order to fill the remaining positions, divisions within the decennial organization hired new employees from outside the Census Bureau. Although it was difficult to attract people in a strong economy and competitive job market, a job fair held in March 1999 attracted many applicants for the open positions (n=4).

[37] Some long-term Census Bureau employees are not enthusiastic about working on the decennial census. They cite the hectic environment, the downsizing and RIFs that occurred after previous decennial censuses, and the poor management and communications practices of how personnel were let go or returned to their divisions after previous censuses.

How effective was the use of term employees? Are there better ways to meet the ten-year cyclical nature of decennial census staffing needs?

Many of the personnel within the Decennial Census Directorate hired towards the end of the decade were "term employees" [38]--new hires to the Census Bureau and recent college graduates. Although use of term employees satisfied the demand for staff resources, interviewees perceived that many of the staff that were hired lacked the confidence and experience to understand the complexities and to handle the sheer magnitude of Census 2000 operations. The interviewees also perceived that the Census Bureau staff members who transferred to the decennial census did not have the knowledge and experience to manage the census, particularly operational field knowledge (n=20); and with the hiring surge late in the decade, not much time remained to adequately train and develop the transferred and new staff members (n=5). This lack of decennial experience placed additional stress on an already taxed personnel system. The Decennial Census Directorate and the participating divisions had to spend extra time educating inexperienced employees on census processes. By 1997, the knowledge base had been so eroded that the Census Bureau had to recruit individuals from retirement with special incentive packages.[39]

What core competencies are needed in a decennial staff? How adequate was both formal and on-the-job training for staff? How might staff be better prepared in the future? Would rotational assignments be of benefit?

In order to maintain an adequate number of staff in the future, the Decennial Census Directorate should bring personnel resources into the organization early in the decade and maintain a base level of core decennial area staff at all times. A core team should work together during tests and the dress rehearsal leading up to the census to create a continuity of working relationships and knowledge throughout the process. Developing teams early in the decade would enable people to build trust and teamwork. The 1990 Census had been managed by a core decennial area staff that had worked together through the last half of the decade. People were in place between 1984 and 1989, in time for the tests and dress rehearsal (1988). Junior staff had the opportunity to learn and develop. Having the people in place created team spirit and continuity within the decennial organization (n=2).

Based on the contractor's benchmarking research with comparable census organizations around the world, a successful census has adequate staffing early in the decade. Other census organizations achieved this with a more even flow of funding in pre-census years. Teams should

[38] "Term employee" is one who is hired from the outside (non-government) for a specific term of employment - usually 2-4 years, to work at headquarters. At the end of their term, they are no longer employed by the Census Bureau. Employees understand when they take a term appointment that there is no guarantee that they will get a job at the Census Bureau after their term is up, although some do have the opportunity to compete for permanent jobs at the end of their term.

[39] Example: working a limited schedule as an incentive to return from retirement.

be formed earlier in the decade to ensure that they build trust and a strong teamwork environment enabling them to function smoothly through a challenging census.

7. EXECUTIVE LEADERSHIP

This section presents the comments related to the executive leadership (Executive Staff) as was pertinent to the conduct of Census 2000. Although not originally included in the Steering Committee's original areas of evaluation, it became clear as the interviews progressed that the changes to both the Executive Staff and decennial census leadership throughout the decade had a significant impact on the management of Census 2000.

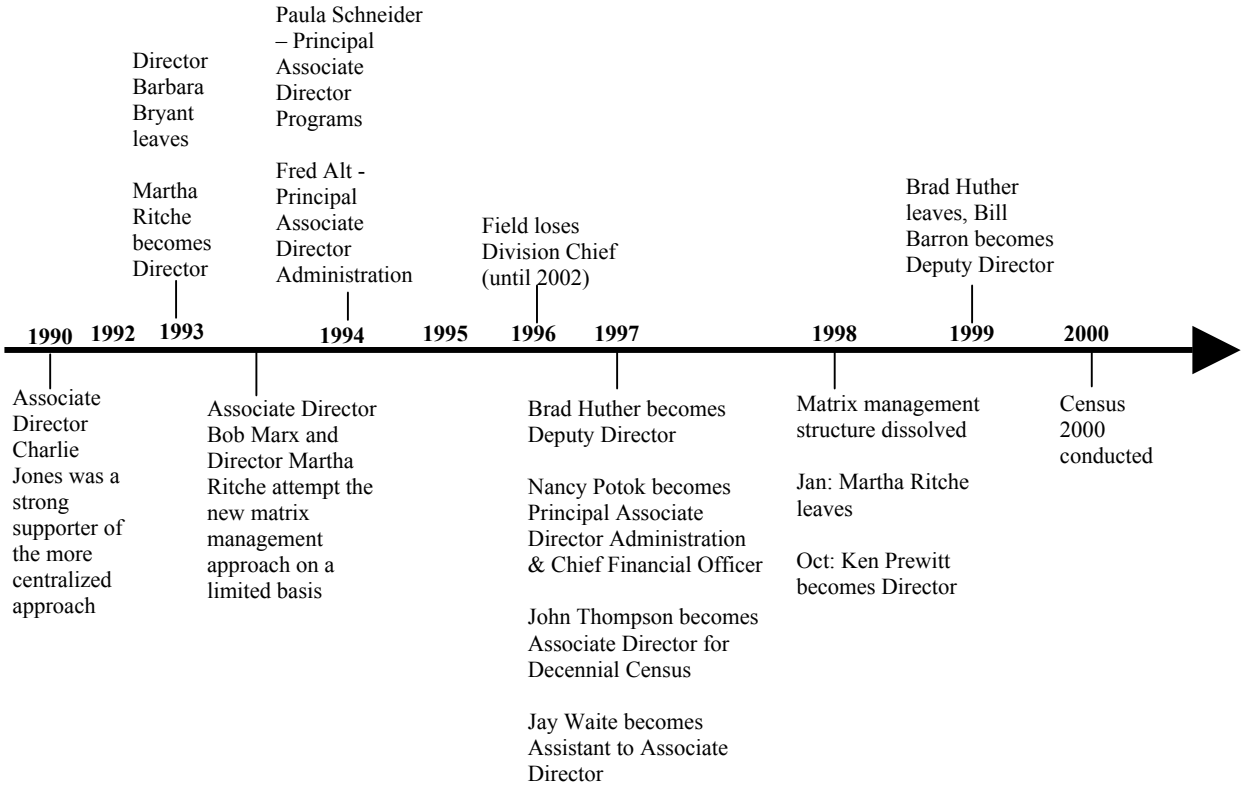
How well were policy guidance, census objectives, and a vision to set common priorities handled?

7.1 Census Bureau and Decennial Leadership Changed Often Throughout the Decade

Of the fifty-two individuals who were interviewed, forty-four commented on certain aspects of leadership with 169 total comments (N=44, C=169). Many interviewees commented that the Executive Staff leadership positions had changed many times throughout the decade [40](n=18) (see Figure 6). They also perceived that each new leader brought his or her own set of priorities (n=9) and that the overall strategic direction of decennial census operations was unclear and changing throughout the decade (n=21). Of those twenty-one, eleven perceived inconsistencies in the messages from the leadership (n=11) and seven felt that the leadership had too many priorities preventing some of the most critical activities from being performed (n=7). Seven interviewees perceived that there were too many new things being attempted and that the Census Bureau should focus on a few critical areas (n=7), while six perceived that the leadership did not know what to fix or what strategy to use (n=6).

[40] The contractor determined that over the 12-year cycle, there were 4 Census Bureau Directors, at least 3 Deputy Directors, the creation of two Principal Associate Directors (PAD) in 1996, another change to the PAD for Administration and CFO in 1997, and three different Associate Directors for the Decennial Census.

Figure 7: Leadership Timeline



Some interviewees commented on the general lack of cohesion among the Executive Staff. Individuals perceived that the Executive Staff did not share a common vision or common leadership goals (n=9). Interestingly, when asked whether the decennial census is a core product of the Census Bureau, five interviewees indicated that it is a core product, while eight indicated that the decennial census is a secondary product to other economic censuses and surveys conducted throughout the decade.

Five people commented that the Ken Prewitt/Bill Barron team and the John Thompson/Jay Waite team later in the decade were strong management teams (n=5). Four people said that strong leadership is needed throughout the decade and that the management team was brought on too late to be truly effective (n=4).

In sum, interviewees perceived that each new leadership change, both at the Director and the Decennial Census Directorate levels, accompanied a change in internal strategy or approach. These changes in priority, coupled with the greater strategic battle over sampling versus traditional enumeration, caused the leadership's messages to be perceived as inconsistent and unfocused. Later in the decade, however, the management team under Director Ken Prewitt was perceived to have been much more focused and effective.

Did staff have a clear vision as to what they should have done or who was responsible for what? This vision reflects the culture of the staff,* including management. The decennial census culture may be different from the culture in the rest of the Census Bureau. There are components within each of the different cultures of our organization that may help or hinder efficient operations. Do the Census Bureau and/or decennial census cultures or some components need to be changed?**

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* Alternatively, the culture of the staff should reflect the management's vision.

**Because the scope of the project included only interviewees with a role in the decennial census, we are unable to comment on the culture of the Census Bureau in general or whether it needs to be changed.

7.2 Cultures Reflected Divisional Priorities

An organization's culture should be defined by the vision, priorities and values promoted by its executive leadership. With each change in the Executive Staff, the interviewees indicated that they perceived a change of vision and priorities for the decennial census. Without clear and consistent communication from the Executive Staff regarding the vision and the values, it was difficult for one distinct decennial culture to materialize and mature. As a result, the "culture" of the decennial organization appeared to the interviewees to be fragmented and inconsistent, reflecting the different cultures of the participating divisions. Because the executive leadership had not promoted a consistent message around which the decennial organization could rally, individual sub-cultures (e.g., operations, management, statistical, technology-based, etc.) based on divisional visions, priorities and values governed.

8. ORGANIZATIONAL STRUCTURE AND MANAGEMENT APPROACH

Good organizational design theory is based on the premise that an organization should be structured to achieve desired results and that some structures are more conducive to achieving certain results than others. Most organizations have at least two types of activities that must be managed. First, an organization will have an idea generation or consensus building activity in order to keep up with current trends and to share knowledge. This is most effectively handled with a team-based structure. Second, an organization will have production, final decision-making or arbitration requirements; these are most effectively satisfied with a streamlined chain of command structure. The challenge to most chief executives is to mix and match these structures and approaches within a single entity in order to achieve their desired results.[41]

8.1 High Level Census Organization

The Census Bureau's primary activity is to produce demographic statistics and economic indicators (as opposed to strictly developing policy or coordinating the operations of other agencies, as do many other federal organizations.) Since the Census Bureau is itself a production organization, it is common business practice that its overall structure be primarily top-down and hierarchical.[42] The Census Bureau, however, must also be innovative and flexible because it must respond to pressure to improve the quality of the census data, to incorporate the use of the latest practical technology, and to reduce costs. Consequently, the Census Bureau must have pockets of idea generating teams nestled within its primarily top down structure. The challenge for Census Bureau executives is to apply these structures and approaches as appropriate in order to create a well-run and efficient production operation, while maintaining the flexibility to accommodate requirements that change from one decennial census to the next.

The primary objectives of the Census Bureau leadership, the Decennial Census Directorate and the other participating divisions, are to plan, execute, report on the results of, and evaluate the decennial census. The Census Bureau has a solid organizational structure that is well thought out, consistent and supportive of its primary business goals and objectives. It is structured in components according to its program areas (decennial census, economic surveys, etc.) and functional support business processes (field operations, human resources, finance), rather than exclusively by function as is common in many other federal agencies. Structuring according to programs and support processes is more conducive to achieving results because the focus is more on improving the end product rather than on protecting internal processes, boundaries, turf, and existing resources.[43] Because the Census Bureau is a nationwide organization with a need for some sort of division of labor, there will always be some tensions among various components of the organizational structure. The objective is to minimize the competition (where appropriate) inherent among the divisional interests.

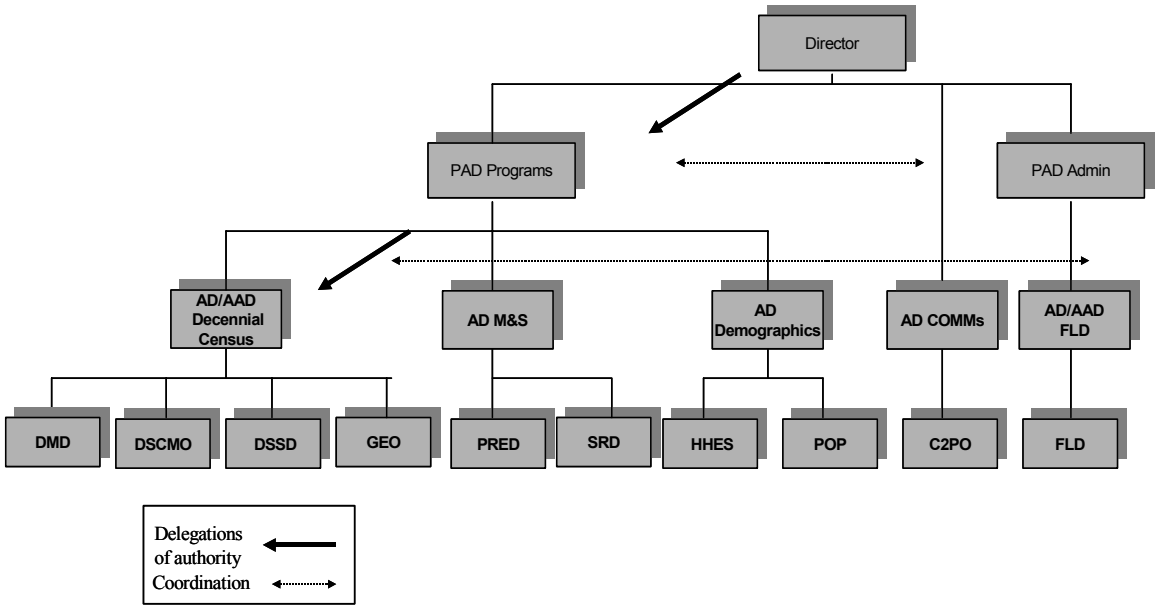
[41] Drucker, Peter F., "Management's New Paradigms," *FORBES,* Oct. 1998, pp. 152-176.
[42] Ibid.
[43] Hammer, Michael and Stanton, Steven, "How Process Enterprises *Really* Work," *Harvard Business Review,* Nov. 1999, pp. 108-118.

a) How effective was the mix of support provided within the Decennial Census Directorate versus outside the Directorate? Should more or fewer of the functions have been within the Decennial Census Directorate?

8.2 Managing Across Directorates

According to Department of Commerce and Census Bureau documentation, the delegations of authority to conduct the decennial census run from the Office of the Census Bureau Director to the Associate Director (AD) for the Decennial Census, through the Principal Associate Director (PAD) for Programs. The Associate Director for the Decennial Census is directly accountable to the PAD for Programs and to the Census Bureau Director for the success of the decennial census program. The Associate Director acts as the Chief Executive Officer for the conduct of the census and, during census years, is assisted by the Assistant to the Associate Director (AAD), who acts as the Chief Operating Officer. The Associate Director must coordinate with his or her peers within the Programs Directorate--the Associate Directors for Methodologies & Standards and Demographics—in planning and coordinating the decennial census. The AD for Decennial Census must also plan, coordinate and implement the census in cooperation with the Associate Director for Field who is outside the Programs Directorate. The Field Division is the only operational unit supporting the decennial census that reports through a different chain of command to the Census Bureau Director. This poses management challenges for the leaders of the decennial census in getting full coordination on planning and implementation.

Figure 8: Current Census Bureau Delegations of Authority



At the highest levels of the organization, the Census Bureau's Field Division has a separate reporting chain from the DMD and the rest of the Decennial Census Directorate. Although organizational restructuring recommendations are outside the scope of this evaluation, eleven individuals commented on the separation of the planning and resource management group from the field operations group in the organizational structure (n=11).

The Executive Staff members that were interviewed overwhelmingly supported maintaining the existing structure, keeping the decennial-related Field staff under the PAD for Administration. They felt that it mitigates the risk to the knowledge base and staffing of field operations because the Field Division supports other surveys and censuses during non-decennial years. At the division and operational level,[44] however, there was support for moving decennial-related field operations back under the PAD for Programs because the current structure presented management challenges in planning, communication and coordination.

8.3 Internal Management Structures and Approaches

The requirements that the Census Bureau be flexible and innovative from decennial census to decennial census, and the push to move to teams throughout the agency, were behind the Decennial Census Directorate's move away from a strong, centrally managed approach used in previous censuses to the "matrix" management attempted during the early to mid-1990s. At the end of the decade, the Decennial Census Directorate returned to an approach where the Decennial Management Division played a greater role in coordinating and integrating the conduct of the census.

What were the strengths and weaknesses of the plan (matrix/centralized) that was used? What were the strengths and weaknesses of the matrix method? Were there other models that should have been considered?

How effective was each of these management approaches in helping to ensure a successful census? How well did they work for management and for staff? What are the relative strengths and weaknesses of each? What is needed for each to work? What alternative models might have worked better?

What was the relevance of timing and the impact, if any, of the management model change from the matrix to the centralized program management?

[44] Including Field Division

8.3.1 Strengths & Weaknesses: Matrix Management/PSC & MIT Approach

From the interviews the contractor found that, during the early to mid-decade years under the matrix management approach, there were consensus building and idea-generating teams in place. The intent behind implementing a matrix approach was to decentralize decision-making to the divisional stakeholders and to promote a sense of ownership for the implementation plans. With little funding for the DMD in the early to mid 1990s, the AD for Decennial Census at the time determined that the planning, integration, and co-ordination of the census could be handled successfully by the division participants. They would work on teams as members of 25 Program Steering Committees (PSCs), each with an assigned program area. The PSCs were comprised of Assistant Division Chiefs and the groups were to come to agreement on specific program issues, facilitated by a PSC lead. The PSCs would then report out to the Management Integration Team (MIT), an assembly of the Division Chiefs involved with census planning.[45]

Of the fifty-two individuals interviewed, 50 interviewees made a total of 450 comments on the management approach of the Census Bureau as pertains to the conduct of the decennial census (N=50, C=450).[46]

Thirty-eight of the interviewees discussed the weaknesses of the matrix approach with 116 total comments (N=38). Most of the interviewees commented that the matrix approach did not provide a mechanism for overall program coordination and integration across and among participating divisions (N=16).

The MIT was to serve as the strategic planning team that would integrate and coordinate the high-level census plan. The interviewees, however, said that there was little strategic integration of PSC efforts by the MIT. They also indicated that there was not enough oversight from the MIT to avoid duplication of effort and to ensure seamless coverage (n=20). Many of the interviewees did not know about the MIT, some had heard of the team but had not attended, and others felt that their position on the MIT was not consistent with their knowledge, skill set or experience. Moreover, the skill set of the MIT member did not necessarily match up with the program area of the PSC.

Originally, the PSCs were to develop their own charters for their program areas. Almost all of those involved with the PSCs commented that there was a lack of clarity in the roles and responsibilities of the PSC teams, that there were few clear lines of accountability and that it was often unclear as to who was in charge (n=17). Many expressed concern that there were just too many PSCs in play and that they took up too much time.

Interviewees also said that there was difficulty on the PSCs in reaching decisions and making progress (n=20). Some individuals commented that there was a lack of subject knowledge from

[45] U.S. Department of Commerce, Bureau of the Census, Decennial Management Division, *Census 2000 Program Steering Committee Charters.*

[46] Some individuals interviewed did not feel that they had enough direct experience to comment on the specifics of the headquarters organization or management approach of the decennial census.

the people on the PSCs (n=5) and that the people on the teams needed to have the appropriate expertise. Others felt that there was too much of a focus on detail, which all too often diverted attention from the more pressing strategic decisions under consideration at the time. One theme that surfaced consistently was that the PSCs often did not know who to interact with from the other PSCs. Consequently, there was little communication across PSCs on issues of overall coverage and interoperability of census program plans.

Lastly, several individuals indicated that the matrix approach was a disaster and put the decennial census at risk because it remained in place long after management recognized that it did not work (n=12).

In evaluating the matrix management approach, the contractor determined that during the early to mid-decade years the main activity within the Decennial Census Directorate should have been policy development, planning and resource management. A teaming, or matrix, structure is the appropriate overall approach to take during this planning phase because the Decennial participants are involved in developing, coordinating, integrating, testing, and evaluating plans.[47] A matrix management approach, however, only works if there is a matrix management organizational infrastructure in place to support it. A Census Bureau matrix, for example, should have an x-axis (divisions) and y-axis (census programs). This would provide the organizational infrastructure from which to draw participants onto teams for activities conducive to decennial planning and resource management. The problem with the approach taken during the mid-90s was that, because of a strategic decision made by the AD for Decennial Census at the time, there was no DMD program management component on the y-axis to counterbalance and coordinate the activities of the participating divisions on the x-axis. In effect, there was no matrix to manage.

Moreover, without effective decision-making mechanisms in place, the PSC structures were not adequately equipped for final decision-making and arbitration activities. The result was that the PSC meetings lingered in discussion phase with little reportable progress. The PSCs needed a hierarchical decision-making mechanism, headed by single individuals accountable for program areas, decision-making, and reporting through a chain, to make decisions or recommendations or to arbitrate disputes among interested parties.

Because of a lack of DMD resources and staffing, the mid-90s PSC/MIT approach lacked an effective counterbalance to divisional interests as well as a final decision-making and arbitration mechanism on the PSCs by which to make decisions and finalize plans.

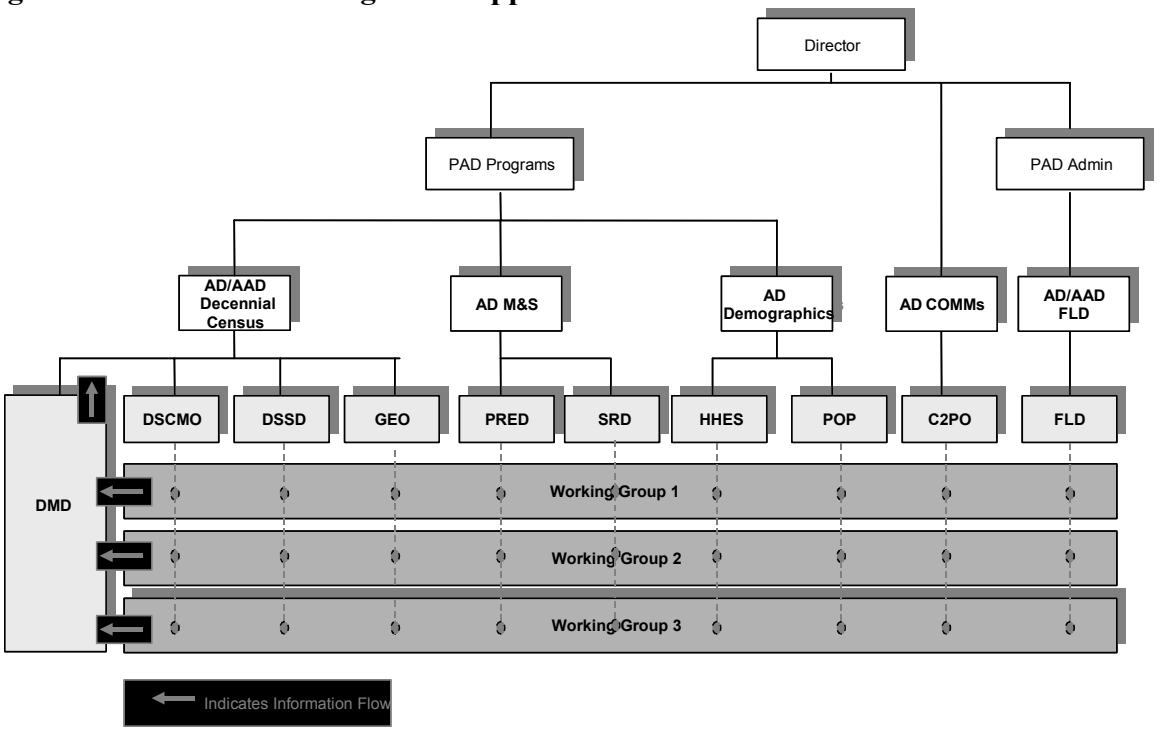
8.3.2 Strengths & Weaknesses: Strong Centralized Management, Strong DMD

The alternative to the matrix approach has been called the "centralized" management approach. The centralized approach, which was employed after 1997, consisted of a more adequately staffed DMD serving as coordinators and integrators of decennial census program areas with the cooperation of the participating divisions. Decisions were made primarily via mechanisms

[47] Drucker, Peter F., "Management's New Paradigms," *FORBES*, Oct. 1998, pp. 152-176.

within the Decennial Census Directorate and the funding was controlled by the AD for Decennial Census. The centralized approach is, in fact, the approach that best represents true matrix management because it features a more robust DMD on the y-axis counterbalancing and coordinating the interests of the participating divisions on the x-axis. It is represented in Figure 9 below. The next section discusses how effective this approach was for Census 2000.

Figure 9: Centralized Management Approach



Seventeen interviewees (N=17) said that there should be a strong centrally managed approach in order to properly coordinate participants and to integrate the planning and execution of the decennial census. There was strong support (n=23) for the DMD to take on the integration and coordination role. Of the twenty-three who commented, sixteen individuals (n=16) said that the centralized DMD approach worked better than the matrix approach, while ten (n=10) stated that the centralized DMD approach is the only one that could achieve program coordination and integration objectives.

Many of those interviewed, however, indicated that when the DMD was staffed and resourced in the late 90s, the DMD staff roles were not clear (n=13) and that the changes late in the decade to the management approach were confusing (n=10). Others indicated, as a general rule, that the roles and responsibilities for all those involved in the decennial organization were not clear (n=12). There was also general confusion as to whether the DMD staff members were to serve as true program managers with decision-making authority, as program coordinators facilitating decennial activity, or as liaisons/conduits of monitoring information between the participating divisions and the decennial census leadership. As the census years approached, it became

apparent that most DMD staff members functioned as facilitators and liaisons monitoring the program. Most decision-making tended to occur at higher levels.

Lastly, there was strong support among the interviewees that the DMD maintain a base staff with a prominent (decision-making) role during years leading up to implementation (n=38), that the DMD be ramped up, and that their roles be well established earlier in the decade (n=8).

The centralized management approach succeeds primarily because the adequately staffed DMD and Decennial Census Directorate provide a single component for coordination, integration, and knowledge of planning, and a balance to the divisions. With the exception of Field division requirements issues, the AD for Decennial Census and AAD also served as the decision-makers and the arbiters of competing divisional interests and issues, which was lacking in the PSC/MIT approach.

8.3.3 Using Different Management Approaches for Different Purposes During the Course of the Decade

By the time the decennial census operational years approached, the strategies, management approaches and staffing situations had changed dramatically and were still in a state of flux. As a result, tangible plans for conducting a traditional census, tailored to the needs of Census 2000, had not yet been fully developed. This created confusion regarding delegations of authority, roles and responsibilities, and decision-making processes.

In the two years leading up to the decennial census, the Decennial Census Directorate and the participating divisions had to develop plans and deliver services simultaneously. The ideal management approaches for developing plans and for delivering services, however, are very different. Plan development is supported predominantly by a team-based approach, which is by definition more collaborative in nature. Service delivery and production processes, being more controlled and repetitive, are best served by a more hierarchical approach which is less collaborative.[48]

What happened at the Census Bureau in the late 1990s was none other than an attempt to do the planning effort and the service delivery simultaneously without appropriately adjusting and communicating that each required a different management approach. With the rush of activity surrounding the census, it became unclear under which management approach participants were operating and for what purposes. Planning and implementation activities were occurring in the same meetings. Some decisions were being made unilaterally within the hierarchy while others were given consideration by all the participants. On the one hand, there was consensus building and consideration. On the other hand, decisions were often dictated from the decennial leadership. The result was some confusion, misunderstanding and often resentment when decisions were being made unilaterally.

A recognition of the use of different management approaches and structures to achieve different results will go a long way toward alleviating some of the confusion that accompanied Census

[48] Drucker, Peter F., "Management's New Paradigms," *FORBES*, Oct. 1998, pp. 152-176.

2000. If staffing and resource issues are managed over the decade, and risks are mitigated via contingency planning, then the census leaders should be able to plan more effectively with a more collaborative approach and supporting structure during the middle of the decade, and then switch to a more exclusive service delivery approach and supporting structure during census years.

The text that follows discusses how the Census Bureau could evolve from a planning approach in the early years of the decade to a delivery approach later in the decade.

For the purposes of this illustration, the census cycle has been separated into three stages: planning, data collection and capture, and data processing. The first is the planning stage, during which plans are developed for the entire decennial census operation. In this stage, new ideas are brought forward and buy-in is obtained among the participating divisions through consensus building. As such, the management approach should be predominantly team-based. At the same time, however, it is important that there be a decision-making or recommendation mechanism nestled into the team-based approach in order to move forward and make continuing progress on day to day tasks and activities. The management approach for this stage should reflect a combination of the two management mechanisms.

The second stage is data collection and capture, which is comprised of the wide range of tasks that take place to collect and capture the census data. By the time the Census Bureau moves into the data collection and capture stage, most of the planning should be completed. Data collection and capture tasks, therefore, should involve the general repetition of previously defined activities according to the overall guidance of the approved plan. Since there is little need for idea generation or consensus building at this stage, repetitive activities are generally more efficient under a chain of command approach. The chain of command should flow from the Director through the PAD for Programs (in coordination with the PAD for Administration) and the Associate Director for Decennial Census (in coordination with the Associate Director for Field) out to the field. There is also, however, a requirement for a free flow of information and open communications with the other participating divisions, and continuous monitoring by the Decennial Census Directorate. Some teaming must occur during the data collection and capture phase, but these operational tasks generally do not need review and consultation by all decennial participants.

The third stage is data processing, which like the data collection and capture stage, consists of pre-determined tasks of processing the previously collected data, and publishing the results. Again, since there is little need for idea generation or consensus building at this stage, the chain of command approach works best as plans are carried out, within schedule and budget. Although there is a chain of command structure flowing from the Director through the PAD for Programs to the Associate Directors, it is very important to have a continuous flow of information and open communications among other participating divisions, and monitoring of progress by the Decennial Census Directorate. Again, some teaming must occur during the data processing phase, but these tasks generally do not need review and consultation by all decennial participants.

9. DECISION-MAKING

Decision-making, whether under the matrix or centrally managed approach, provided challenges to managing the decennial census. Under the matrix approach previously discussed, the lack of a functioning decision-making mechanism resulted in an inability to reach decisions and to make tangible progress. The centralized management approach, though better designed than the matrix approach, was beset by its own set of challenges. Decision-making was strongly controlled within the offices of the AAD and AD for Decennial Census. It was tightly controlled as a measure of mitigating the risks that accompanied the overwhelming volume of inquiry from the political oversight organizations.[49]

The centralized approach included a Census Operational Managers (COM) forum, which was an interdivisional group for raising issues and reaching consensus during the planning and implementation phase. The approach also included a formal Issue Resolution and Change Control (IR/CC) mechanism that was to arbitrate decisions within the DMD structure pertaining to the settlement of divisional interests. Finally, the approach included the Operational Status and Assessment Meetings (OSAM), which were daily status report meetings for census managers during the decennial operational years.

How effective was each of the components of the decision-making process (COM, IR/CC, the Executive Staff, various steering committees, and the like)? How well did they work? How were policy decisions and issues raised and considered? How were decisions made? How were the results of the decisions disseminated to those who needed to know?

Were these the best decision-making processes to use? What role did/should objective information play in decision-making? Were there alternatives available at the time? What processes would have worked better?

What was the process for reaching key decisions? (For example, the process for arriving at the final design and implementation strategy for the mailed questionnaires).

9.1 Decision-Making in the Centralized Management Approach

Of those interviewed, 35 commented on the decision-making processes (N=35). This section covers interviewee comments about decision-making groups from the centralized management approach (N=27, C=70). Many commented on the irrelevance of the processes and said that decisions floated up to senior management of the Decennial Census Directorate (n=19). Fifteen indicated that the AD for the Decennial Census, assisted by the AAD, made many of the decisions (n=15) and that there was little empowerment for the lower levels to make decisions (n=6). Many felt that decisions in general were not made in a timely manner (n=21), often

[49] See Section 4.0 on Political Environment

resulting in delays to the schedule. And when decisions were made, they were often revisited, even if the resulting solution was working well (n=9). Some commented that the decision-makers had not engaged the appropriate divisions, particularly on funding issues (n=3), to hear how a decision would impact a program (n=7).

The sections that follow discuss the forums for status reports and decision-making that were proposed under the centralized management approach. Many of the concerns raised in the comments above will be addressed in the course of the discussions below.

9.1.1 Census Operational Managers (COM)

In 1998, the *Roles and Responsibilities* document outlined a management approach that included mechanisms for raising concerns, arbitrating those concerns, handling appeals and managing change control for issues that arose during the implementation of Census 2000 operations. The COM was to be a forum through which issues could be initially raised and considered. According to those interviewed, the COM became the first step of the issue-resolution process and it facilitated communications throughout the Census Bureau (n=8). Many interviewees, however, considered the COM approach ineffective (N=16, C=21) with some managers bypassing the entire process altogether (n=5). The process became ineffective because decisions were made through ad hoc mediation and approval processes, rather than through the formal process. This challenge hampered the Data Capture System component. When issues were initiated through the formal processes, little action occurred to resolve them. The problem was perceived to be a lack of DMD staff to implement the change management, rather than with the decision-making process itself. In 1999, the COM meetings were discontinued completely (n=7).[50]

In studying the *Roles and Responsibilities* document it is clear that the COM structure, from an organizational perspective, was inadequately designed for resolving issues. Although the original document states that the intent behind the creation of the COM was to push decision-making to the lowest levels technically possible, there was no mechanism in place to support that intent. The COM chair had no decision-making authority and served exclusively as a facilitator of all the other interests of the participating divisions. Only when all COM participants agreed or were present at the meeting could any issue come to conclusion.[51]

The problem with this design is that committees are horribly inefficient at making decisions. When all competing interests are required to be satisfied before a conclusion can be reached, decisions become watered down to what everyone on the committee can agree on. Because there are often conflicts between what is best for a division versus what is optimal for the census organization, the participants are generally put into a position of conflict of interest. A true chair, endowed with final decision-making or recommendation-making authority to the next

[50] The contractor followed up with 6-7 interviewees to obtain examples of when decisions went outside of the COM process. Most of the interviewees could not recall particular decisions that did not go through the COM/IRCC process, however, they did remember that the process was not always effective.

[51] Decision-making within COM was based on the following criteria: The decision shall be consistent with overall policy and/or expectations; The decision has no adverse impact on other operations (or such impact can be obviated); The decision can be accomplished within time and budget constraints.

level, would have had the authority to arbitrate disputes and to expedite progress on the important issues under consideration.

9.1.2 Issue Resolution/Change Control Process (IR/CC)

The *Roles and Responsibilities of Census 2000 Participants* document also introduced the Issue Resolution/Change Control process (IR/CC), which was proposed as a formal issue resolution mechanism to formally arbitrate disputes and handle appeals (N=15, C=22). The IR/CC process required that the DMD program managers write up a discussion of both sides of the debate and hold a hearing of the issues. A decision was made offline by the Decennial Associate Director or Assistant to the Associate Director and was communicated via the "decision memo series."[52]

Interviewees claimed that the IR/CC did not work because the people with the necessary knowledge often did not attend the meetings (n=8). Several individuals commented that this process was too time-consuming (n=6) and, particularly during census years, decisions needed to be made on a more real-time basis. Communicating decisions via the electronically distributed memos worked initially, but they became less useful later in the process (n=6) when there was little time to read written documentation.[53]

The challenge to the IR/CC process was two-fold. First, it was too time consuming during the census years because it was text based. The text-based IR/CC decision series would function in a less time-pressured environment, but did not function well during census operational years. The IR/CC during census years requires a more real-time, streamlined process—probably oral discussions—that are documented only after the arguments have been put forth and decisions rendered. Decisions made during decennial census operational years could be announced during meetings or dispersed via voicemail in order to ensure that everyone's attention has been drawn to the information.

Second, the Associate Director level leadership allowed decision-making mechanisms to be by-passed, which often rendered the structured processes irrelevant. For the DMD program managers to be held accountable for integrating programs and for decision-making, the program managers' authority must be fully aligned with an area of responsibility and with appropriately aligned accountability in order to complete implementation of the decennial census. By allowing dual chains of command to the Decennial Census Directorate leadership, the delegations of authority are voided and the leadership effectively renders the DMD program managers and the structured decision-making processes irrelevant. Dual chains also provide a perfect forum for end-runs, when parties involved in a dispute do not agree with a particular decision. This situation may explain why decisions were not perceived to be final, and were revisited even if they appeared to have solved the initial problem.

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[52] In general, changes will be evaluated based on criteria including impacts on operations, cost, coverage, content data quality, consistency with policy, and perceptual implications. (U.S. Department of Commerce, Bureau of the Census, Decennial Management Division, *Roles & Responsibilities of Census 2000 Participants,* 1998, Decision-making including IR/CC, Section 2: Information Gathering & Analysis).

[53] The contractor followed up with 6-7 interviewees to obtain examples of when decisions went outside of the IR/CC process. Most of the interviewees could not recall particular decisions that did not go through the IR/CC process, however, they did remember that the process was not always effective.

9.1.3 Operational Status and Assessment Meeting (OSAM)[54]

The OSAM (N=16, C=27) was a one-hour daily status meeting that was established in November 1999 as a way to monitor the day-to-day progress of census execution. The DMD program managers would meet with operational managers and staff every morning to get updates on the progress of each of the programs consistent with the activities of the Master Activities Schedule (MAS) and the Cost and Progress (C&P) Reports.[55] The DMD managers would each take five minutes to present the status of their program's execution to the AD for Decennial Census, the Assistant Director, participating division chiefs, DMD Assistant Division Chiefs (ADCs) and program managers.

OSAM became a forum to identify implementation problems as they occurred (n=10). Because the OSAM was primarily a status report meeting, it was not pro-active in nature. Unfortunately, few strategic risk management mechanisms were in place to identify potential challenges and problems often went unreported (n=2). For OSAM meetings to have been more effective, the DMD program managers and the decennial leadership should have had decennial experience so that they could pro-actively identify and address future risk areas before they got to be large problems. Another concern was that the DMD staff members did not have the background knowledge to effectively report on the programs; this was sometimes embarrassing to the presenter and uncomfortable to the attendees (n=2).

Including preparation and meeting time, OSAM was extremely time-consuming (n=4). OSAM participants expressed the desire to listen to status reports that were relevant to their areas (approximately fifteen minutes of meeting time) and to use the rest of the time to be back at their offices working on their programs. Some participants felt that letting division chiefs present their own status reports would have been more effective, more consensus-oriented, and would have reduced the workload significantly.

9.2 Decision-Making in Large, Complex Organizations

The determination of decision-making approaches for large organizations is important to its achieving tangible progress toward objectives. The most important issues to consider are the sources of authority and the criteria for each level of decision-making.

There are several sources of authority within an organization, some formal and informal. Formal sources include delegations of authority as outlined in legislation, department directives, or those formally negotiated at lower levels of the agency. Relative grade level and Senior Executive Service (SES) status among employees can also serve as formal sources for determining who will have final authority within federal agencies. There are also, however, sources of informal authority including "referential" leadership (based on an individual's ability to assume responsibility and get things done) and subject matter experts (based on an individual's knowledge or skills).

[54] Although OSAM were not decision-making forums, they were part of the "centralized approach," were specifically mentioned as within the scope of the evaluation, and are best discussed at this point in the document.
[55] U.S. Department of Commerce, Bureau of the Census, Office of the Director, *Memorandum for Operational Status and Assessment Meetings*, Preston Jay Waite, Nov. 18, 1999.

When formal mechanisms for decision-making are unclear, ill-informed, or not clearly communicated, the informal leaders often emerge to heavily influence decision-making. If, for example, the formal decision-makers are not knowledgeable in a certain subject area, then the informal subject matter experts tend to assume an inordinate, and unauthorized, amount of influence in decision-making. The experts or referent leaders may not have the same interests as the formal decision-maker and, as such, they may exert influence such that a different decision will be made. This would be inconsistent with the intent with which the formal mechanisms were created.

Applying the model above to Census 2000, the formal authority as of 1998 resided with the decennial program managers. The informal authority of referential leadership and knowledge, on the other hand, resided with the subject matter experts participating throughout the decennial organization. The interviewees commented on their perception of the lack of experience of the decennial program managers, the lack of clarity of roles and responsibilities, and the need for a more formal strategic integration and coordination role for DMD staff. These perceptions generally indicate that the program managers, heavily dependent on the subject matter experts for information, may not have had the skills to independently evaluate information as a basis for decision-making. As such, program managers were perceived as weak in providing integrated and informed strategic direction. In addition, the perception that many decisions were revisited, even if the solutions seemed to be working well, indicates that there were probably challenges to the formal authority figures from the informal sources dissatisfied with the results.

As to the decision criteria for who should make decisions, we can suggest that certain decisions be made at the executive level; for example, general policy on staffing, funding prioritization, interoperability among processes and technology, and decisions involving cross-divisional programs. In addition, objective information should serve as the basis from which the Executive Staff begin to evaluate the decision to be made. There are other issues in the federal environment, including political and functional feasibility of new ventures within a determined time frame that must also be considered when making decisions at the strategic level.

At the executive level, a formal designation and communication of the delegations of decision-making authority to lower levels and criteria should be undertaken in cooperation with the principles involved. The delegations of authority should then be clearly communicated through a formal process. In the absence of such a process, individuals such as subject matter experts or referent leaders may assume "shadow" positions of authority. Informal authority figures can dilute the authority of the designated decision-maker and create confusion regarding the chain of command.

In negotiating delegations of authority, executives held accountable for program success may choose to delegate some of their authority to program managers or may determine that all decisions require their review. This is the executive's prerogative for which he or she will be held accountable. Program managers, however, are usually delegated final decision-making or recommendation authority for their program areas. If program managers are given decision-making authority on policies and guidance, they should also be given discretion over funding authority in order to ensure that their decisions will be respected. Finally, reporting lines should

be formalized and should mirror the delegations of authority. This would ensure that those with the authority to deliver results would be held accountable for those results.

10. PLANNING AND RISK MANAGEMENT

Planning and Risk Management were not specifically targeted issue areas in the original scope of this project. Many interviewees, however, commented on the weaknesses in the planning process and the absence of risk mitigation strategies. This section details interviewee comments about census planning weaknesses, written guidance, the impact of the late Supreme Court decision on planning, and 2010 Census planning.

Developing plans and mitigating risk should be core business processes of the decennial headquarters organization and management approach; plans and strategies should be the products of these processes. As such, poor planning and poor risk management are simply symptoms and by-products of many of the management challenges discussed previously in this report. Addressing the structure, approach, funding and resource management challenges already discussed should go a long way toward ameliorating some planning and risk management challenges.

10.1 Weaknesses in the Planning Process

Good planning processes include the following elements: 1) describe the project, 2) identify stakeholders and divisions that will be impacted, 3) determine uncertainties, threats, and risks, 4) develop course of action and project concept/activity plan(s), 5) design project organization and recruit project staff, 6) develop project management and controls, 7) develop communication strategy and plan(s), 8) identify project staff, skills, and competencies, 9) identify other resources (material, equipment etc), and 10) assess project costs. Of the forty-seven people who commented on planning (N=47, C=207), thirty-four perceived that there were weaknesses in the Census 2000 planning strategy (n=34, c=87). They felt that the key to census success begins with early planning (n=11), that the planning process should have started earlier (n=27, c=49), but that few concrete plans existed by the end of the decade (n=7). Furthermore, some felt that planning needed to be led at a more strategic level (n=3).

The late Supreme Court decision impacted decennial census planning significantly (N=23, C=31). With regard to the planning timeline, interviewees commented that late planning caused problems during the execution phase (n=14), in part because divisions planned for a sampling design, rather than for a more traditional design. Changing the census design could not easily be accomplished and resulted in significant challenges (n=7). Although plans for the dress rehearsal were created for both types of design, the second plan was incomplete, since it had to be hurriedly implemented (n=9).

While all divisions participating in the decennial census could have had more involvement with the planning process, it was perceived that more involvement was particularly needed from the Regional Directors. (n=17). Regional involvement in planning is crucial to ensuring that both field and headquarters eventually implement strategies under the same general framework (n=17). Of the seventeen senior managers interviewed with experience in the DMD or Decennial Planning Division (DPLD), only six (approx. 35 percent) had some form of experience in the field.

10.2 Program Master Plans (PMPs)

Program Master Plans are documents that outline the activities, schedules, and dependencies by which each of the program areas are to execute their decennial census operations. As defined by the *Roles and Responsibilities* document, the PMPs should have contained many of the elements needed for good planning.[56] Due to insufficient staff resources, the development of PMPs was not started until 1998. This late start coupled with the fact that the census design strategy was not finalized until early 1999, resulted in most of the PMPs not being finalized until after the census (n=10). In contrast, the PMPs for the 1990 census (called requirements documents) were finalized before the census and provided significant documentation on guidance and requirements (n=6). The Census 2000 Publicity Office (C2PO), in cooperation with the DMD, completed their plan ahead of schedule and credited the creation of the PMP as one of the crucial factors for the advertising campaign's success.

10.3 Contingency Planning

Twenty-one interviewees said that contingency planning (N=21, C=35) should have been handled by the Executive Staff and leadership of the Decennial Census Directorate at a strategic level. There was little contingency planning in place for Census 2000 that might have enabled the Census Bureau to react more effectively to the decision to pursue the traditional census approach (n=9). Interviewees also felt that the matrix approach and dual path planning put Census 2000 at significant risk (n=6).

[56] The PMPs were required to contain the following planning elements: 1. Introduction – Summary, Description, and Purpose of the Operation, 2. General Design and Workflow (describes inputs needed, who will provide the inputs, steps required in the workflow, and the outputs and deliverables each program area will produce, 3. Cost Assumptions, 4. Schedule and Responsibilities, 5. Evaluation Requirements, 6. Differences from the dress rehearsal, 7. Any additional elements - U.S. Department of Commerce, Bureau of the Census, Decennial Management Division, *Roles and Responsibilities of Census 2000 Participants*, 1998.

11. HUMAN RESOURCES MANAGEMENT

Human resources management is an area that could use significant development within the Census Bureau. This section reports on the comments of the interviewees in relation to human resources practices. Although staffing levels were clearly a driver for many of the Census 2000 challenges, the situations were further complicated by inattention to the use of human resources strategies to develop and maintain the competencies of the staff members and the knowledge base of the organization.

> What core competencies are needed in a decennial staff? How adequate was both formal and on-the-job training for staff? How might staff be better prepared in the future? Would rotational assignments be of benefit?

A significant number of interviewees (n=26) mentioned the importance of succession planning, career development and management training to better prepare and equip the staff members for conducting the next census. They strongly supported the need to better prepare junior employees for future management roles.

The comments below revolved around the need for management expertise in the decennial leadership, long term rewards for participating in the decennial census, and career development and succession planning as tools to safeguard the decennial knowledge base.

11.1 Promotions Based on Technical Knowledge, with Little Consideration for Management Skills

Some interviewees perceived that the hiring and promotions associated with the decennial program were determined primarily by technical knowledge, with little emphasis on management capabilities (n=7). Having much more of a technical focus than a management focus, the newly promoted managers did not have adequate training to handle the more managerially related tasks. Participants should be rewarded for their management skills in addition to the quality of their work. Many interviewees stressed the need for the Census Bureau to focus as much on rewarding good management skills as on good technical skills.

11.2 Few Long Term Rewards for Working on the Decennial Census

The decennial census, as a core product of the Census Bureau (n=5), should have the best people working on it. Some interviewees indicated that there was a perceived lack of rewards for participating in the decennial census beyond the temporary promotion (n=9). In the staffing section, the interviewees stated that some long-term Census Bureau employees, outside the decennial area, are not enthusiastic about working on the decennial census. They cited the hectic environment, the downsizing and Reductions in Force (RIFs) that occurred after previous decennial censuses, and the poor management and communications practices of how personnel were let go or returned to their divisions after previous censuses. Some employees had also cited

losing the opportunity for a permanent promotion in their home division while accepting a temporary promotion in a decennial division.

The people who left their divisional positions to support this decennial census demonstrated a willingness to manage risk and to be flexible. They should be rewarded for taking risks and stretching their capabilities as workers and as managers. In the future, criteria for promotion could include competencies such as risk-taking, management skills and training and the ability to demonstrate flexibility and creativity in a fluid situation.

11.3 Minimal Use of Career Development and Succession Planning

Because of the downsizing and the hiring freeze from 1991 to 1996, junior staff may have been moved up too quickly and without the appropriate amount of technical and managerial training, and experience with test censuses and dress rehearsals into program leadership roles. The lack of a clearly defined career development model and management training plan resulted in a large number of managers who lacked both the technical knowledge and the managerial expertise required for managing decennial census operations.

Additionally, formal career development planning was lacking for non-Mathematical/ Statistician mid-level managers. The introduction of dedicated management training programs will help these managers to develop the skills necessary to perform well at the next level.

Many interviewees commented on the need for succession planning (n=17). People felt strongly about the importance of succession planning, because more managers are becoming eligible for retirement in the coming years. Interviewees mentioned that only a few rotational programs existed throughout the Census Bureau, and stressed the need for more rotational programs to enable staff to develop skills outside their area of expertise.

12.COMMUNICATIONS

Managers develop and implement communications strategies to communicate a shared vision and to convey important priorities and messages to internal staff and/or external stakeholders about the status of operations, the values of the organization, and the culture or the "way we do business around here." In addition, communications strategies are used to facilitate consensus building and buy-in among participants for a new initiative. Communications processes generally consist of activities through which a chain of important messages are communicated to target audiences or stakeholders. Evaluating the success of decennial communications is part of the overall effort to assess the management approach used for Census 2000.

Census Bureau leadership had a challenging task in managing communications because many internal and external players needed to know what was going on at various times within the census cycle. Thirty-five of the 52 individuals interviewed commented on the challenges in the communications area (N=35, C=95).

12.1 The Approach to Internal Communications

To facilitate the discussion, the contractor introduced the following framework and components for an effective communications approach. In the section that follows, the contractor evaluated communications based on this framework and approach.

12.1.1 Components of an Effective Strategic Communications Approach

Managers should consider five components of a communications approach when making decisions regarding a specific message:

> ***Key Stakeholder/Target Audiences:*** Audiences who are critical to the communications objectives must be identified at the point of message creation.
>
> ***Messages:*** With key audiences identified, core messages that are both relevant and substantive must be created.
>
> ***Vehicles and Channels:*** Many vehicles and channels of communication may be used, including meetings, written e-mail, memos, newsletters, brochures, videos, conference calls, voice mail, telephone hotlines, presentations, Internet/Intranet sites, press briefings, and press releases.
>
> ***Frequency:*** Communications strategists must consider how often a message should be communicated to the target audience or stakeholder group.

Feedback: A method should be selected to receive feedback from the target audiences to determine what the audiences recall and retain about the message, how they feel about it, and what they did with that information.

Inattention to any of these components can lead to a communications failure. During Census 2000, for example, interviewees reported that some decisions were not communicated well because it took too long and because the channel was text-based. The subsequent failure of the decision dissemination from this forum was not because the decisions were not made, but because the information was not delivered in a timely manner through a channel that was useful to the target audiences.

The *Roles and Responsibilities of Census 2000 Participants* document, drafted by Decennial Management Division (DMD) staff in 1998, describes the internal communications structure for the decennial census. According to the document, the delegations of authority for the internal communications were as follows:

- The Associate Director (AD) for Decennial Census works with the Executive Staff to create policy guidance and strategic direction. The AD communicates this guidance to the Assistant to the Associate Director (AAD) for Decennial Census. The AAD then communicates this guidance to the Chief, DMD, who in turn communicates the guidance and direction information to all Census 2000 participants.

- The Chief of DMD communicates information between the participating divisions and offices and the Decennial Directorate leadership. The Chief, DMD communicates this information through the program management branches.

- The Decennial Communications staff has the responsibility for communications of decennial census information to constituencies, both inside and outside the Census Bureau. Decennial Communications, led by the DMD Branch Chief for Decennial Communications, provides a focal point for access to information about the census program.[57]

Although the *Roles and Responsibilities* document described the delegations of authority and reporting lines, not all census participants were made aware of the document. As was previously described, the DMD leadership did not widely distribute the document or deploy the approach through formal channels. There was limited awareness of the document outside the DMD, and the contractor found that many interviewees had never heard of it.

There is little record of an internal communications approach or the implementation of a formal communications structure for Census 2000. Some management groups and MIS tools provided information to participants as a by-product of their primary function, but there is no evidence that there was a strategic approach to developing and implementing a methodology specifically designed to facilitate communications across the organization.

[57] U.S. Department of Commerce, Bureau of the Census, Decennial Management Division, *Roles and Responsibilities of Census 2000 Participants*, 1998, p 12.

How effective were the communications within the Decennial Directorate, and between the Decennial Directorate and other directorates with participating divisions and offices? What methods were most effective and why? Which methods were least effective and why? What methods could be used to communicate most effectively among the participants for various purposes?

12.2 The Internal Communications Structure for Census 2000

With little documentation of formal communications plans to evaluate, the contractor deferred to analyzing the interview data regarding the management meeting groups[58] and the MIS tools for their usefulness as a communications tool within the decennial staff. Interview comments generally reflected on the effectiveness of the information flowing vertically between the executive staff and the operational staff and horizontally among the operational divisions.

12.2.1 Interdivisional Communications

While problems with internal communications existed, interviewees were split in their opinions, specifically about the effectiveness of communications across divisions. Interviewees commented that some decennial census participants championed good communications across divisions (N=14, C=18).[59] Eleven interviewees indicated that the DMD staff facilitated discussions between the DMD and the participating divisions (n=11, c=13). These interviewees commented that some of the DMD staff created an environment that was conducive to discussions among divisions and that certain reporting mechanisms and MIS tools served as useful tools for interdivisional communication.

Some interviewees felt that there were too few opportunities to interact with their counterparts in other divisions and that these interactions would have helped the census participants to execute cross-divisional census activities.

12.2.2 Census Operational Managers (COM)

COM was an interdivisional group whose primary purpose was to raise and resolve issues on census operations and to build consensus among the members. Although communications was not the primary purpose of COM, it did serve as an informal internal communications mechanism; staff members participating in COM were responsible for keeping their home divisions abreast of issues addressed during the meetings.

As discussed previously, many interviewees considered the COM approach to be operationally ineffective (N=16, C=21),[60] with some managers bypassing the process altogether (n=5). In

[58] Mentioned in the *Roles and Responsibilities* document.
[59] N=14 comprises 2 Executive Staff, 5 Division Chiefs, 3 ADCs, and 4 Branch Chiefs.
[60] See Section 10.1.1: Census Operational Managers (COM), p. 36.

1999, COM meetings were discontinued (n=7).[61] Even when the COM was operational, it did not succeed as an informal communications mechanism because the message delivery was left to the discretion of the participants and was often not completed. In other words, there was no specific process through which the COM members should communicate with their divisional staffs and little accountability for failure to do so.

12.2.3 Issue Resolution/Change Control (IR/CC) Process

The Issue Resolution/Change Control Process was a formal mechanism whose primary purpose was to provide a mechanism for operational decision making, with the DMD Program Managers assuring that all budgetary, timing, quality, policy, design, and other factors were considered. Although communications was not the primary purpose of the IR/CC, it did serve as an informal internal communications mechanism. The IR/CC mechanism, however, suffered from lack of attendance by key personnel. Some key persons chose not to attend and instead may have sent staff members who lacked the requisite knowledge or authority.

Interviewees did not view the communications from the IR/CC process as optimal because decisions were not communicated to all relevant employees on a near real-time basis; formal communications were delayed until the discussions and decision had been formally written. As the Census Bureau moved closer to Census Day,[62] participating staff members indicated that they needed more near real-time information on important decisions because they were operating under a scheduled time frame. The delayed release of decisions was not conducive to effectively managing the census on a real-time basis.

Decisions from IR/CC were also distributed via an electronically distributed decision memo series. Participants indicated that as Census Day approached, they had less and less time to read email regarding the decision memo series. As a result, participants generally used word-of-mouth communications or status meetings, as opposed to the decision memo series, to find out about decisions that directly impacted them.

12.2.4 Strategic Communications from Executive Staff to Operational Staff

Twenty-two of the interviewees felt that although communications were adequate among the divisions, the decennial leadership did not share enough information through the DMD to the divisions (n=22, c=37).[63] These individuals perceived that the executive leadership did not provide consistency and clarity of direction to the Census 2000 participants (n=6, c=15). Comments from interviewees indicated that the overall strategic direction was unclear and fluctuated throughout the decade (n=21).[64]

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[61] The consulting team followed up with six to seven interviewees to obtain examples of when decisions went outside of the COM process. Most of the interviewees could not recall particular decisions that did not go through the COM-Issue Resolution/Change Control (IR/CC) Process, but they did remember that the process was not always effective.

[62] April 1, 2000.

[63] N=22 comprises 4 Executive Staff, 9 Division Chiefs, 6 ADCs, and 3 Branch Chiefs.

[64] "Of those twenty-one, eleven perceived inconsistencies in the messages from the leadership (n=11) and seven felt that the leadership had too many priorities preventing some of the most critical activities from being performed (n=7). Seven interviewees perceived that there were too many new things being attempted and that the Census

Sixteen individuals commented that DMD's role as liaison between the Executive Staff and the operational staff was not very effective (n=16, c=19). More specifically, interviewees commented on the perceived lack of strategic direction from the Executive Staff, through the Decennial Directorate leadership and the DMD (n=11, c=21).[65] Finally, interviewees commented that they sometimes received direction too late to be useful.

12.2.5 A "Close Hold" of Information Interfered with Communication Flow and Access to Critical Data

What is the correct balance between having the information needed to manage our work versus the same information being available as public information?

Some of the interviewees speculated that the flow of information down to the divisions may have been restricted because the DMD and the decennial census leadership had concerns about the dissemination of information to external stakeholders.[66] The DMD staff may have felt the need to hold information close because of a legitimate risk that inconsistent information would be communicated to external parties through uncoordinated channels. The "close hold" of information may have hindered decennial census operations because not all Census 2000 participants may have had access to the informational resources they needed to effectively perform their duties.

12.2.6 Dual Communications Channels Sometimes Caused Confusion

Interviewees suggested that the Associate Director-level leadership sometimes bypassed the decision-making mechanisms that were coordinated by DMD staff.[67] Similarly, some decennial participants commented that they would receive instructions directly from the Decennial Census Directorate or outside the Decennial Associate Directorate leadership that were inconsistent with the communications from the DMD staff.

The operational staff members indicated that the dual channels of communications caused confusion and that they often did not know which guidance to follow. With dual communications channels and little time to coordinate the internal messages, the DMD and other

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Bureau should focus on a few critical areas (n=7), and six perceived that the leadership did not know what to fix or what strategy to use (n=6)."

[65] N=11 comprises 1 Executive Staff, 6 Division Chiefs, 3 ADCs, and 1 Branch Chief.

[66] In the external communications section, we will discuss the practice of operational staff members speaking directly to the media and to external stakeholders.

[67] "For the DMD program managers to be held accountable for integrating programs and for decision making leading up to the implementation, the program managers' authority must be fully aligned with area of responsibility and accountability to allow for effective implementation of the decennial census. By allowing dual chains of command to the Decennial Census Directorate leadership, the delegations of authority are voided and the leadership effectively renders the DMD program managers and the structured decision-making processes irrelevant. Dual chains also provide a perfect forum for end runs, when parties involved in a dispute do not agree with a particular decision."

staff members from participating divisions could not have had a full understanding of the status of activities for which they had responsibilities.

12.2.7 Operational Status and Assessment Meetings (OSAM) as an Executive-Level Communications Mechanism

The Operational Status and Assessment Meetings (OSAM) were daily status report meetings meant to give managers an independent assessment of overall progress during the decennial operational years. OSAM provided a forum for DMD Program Managers and senior staff to discuss progress and issues with the participating Division Chiefs and the Decennial Directorate leadership. Interviewees commented that these meetings served as an effective forum for the exchange of status information, but that there was no specific direction for communicating this information to their respective operational staffs. Participants also commented that the people with appropriate knowledge of the operations and status were not always present at the meetings.

12.2.8 Communications from Operational Staff to Executive Staff

According to interviewees, operational difficulties for certain initiatives were at times not communicated to the Executive Staff, Census Managers, and the Decennial Census Directorate leadership in a timely manner. Some interviewees commented that this lag in communications led the Executive Staff to make public statements or commitments to local officials regarding the census based on erroneous assumptions about the complexity, magnitude, and quantity of resources necessary to complete certain programs.

12.2.9 Other Methods That at Times Worked Well

Interviewees commented that certain MIS tools served as effective informal communications mechanisms during Census 2000: the Master Activity Schedule (MAS), the Cost and Progress System (C&P System), and the Census 2000 Cost Model (Cost Model). Interviewees commented that although these tools were valuable in sharing information and facilitating communications among staff across divisions, the effectiveness of these tools could be improved by enhancing functionality, accuracy, and flexibility in adapting to changes.

12.2.10 Knowledge Management[68]

Six interviewees commented on the lack of an effective knowledge management approach for Census 2000 (n=6, c=9). According to the *Roles and Responsibilities* document, the DMD Decennial Communications group had responsibility for Census 2000 change and knowledge management activities. Decennial Communications maintained a repository of key Census 2000 documents via the Census 2000 Personal Computer Document Organization and Control System (PCDOCS).[69] According to interviewees, most Census 2000 participants did not use or

[68] Knowledge Management is the process through which organizations generate value from documenting, managing and maintaining their intellectual and knowledge-based assets. It is the way that organizations create, capture, re-use and learn from knowledge to continue to achieve organizational objectives.

[69] PCDOCS is the software used for maintaining and accessing an electronic library of documents. PCDOCS will document the operations of the Census 2000. The files are maintained by Decennial Communications in the

contribute to the upkeep of the PCDOCS. Because a considerable number of employees with decennial expertise would be eligible to retire shortly, interviewees expressed concerns about safeguarding the knowledge base with knowledge management tools.

Decennial Management Division. U.S. Department of Commerce, Bureau of the Census, Decennial Management Division, *Roles and Responsibilities of Census 2000 Participants*, 1998, p. 14.

13.MANAGEMENT INFORMATION SYSTEMS

The Census 2000 Management Information System (MIS) was designed as "the official source of information for Census 2000, including schedule, performing divisions or organizations, budget, cost, and progress."[70] The MIS included functionality enabling system users to assess performance on decennial-related activities by providing them with easily accessible cost and schedule data. Census 2000 participants used the MIS to access data for decision-making and "to facilitate a more effective and efficient process for planning and implementing Census 2000."[71]

The MIS is a loosely coupled system comprising a scheduling software and a data warehouse that is used to report on the cost and progress of major data collection, data capture, and data processing operations. The data warehouse used SAS Information Delivery System software products[72] and is populated by a number of feeder systems.[73]

This section discusses the general findings of the MIS in terms of how well it supported participants in managing and conducting Census 2000. Two primary levels of system users were program managers and operational participants. The program managers used the MIS for resource planning and for monitoring costs and progress. The operational participants used the MIS for progress reporting, resource allocation, and for monitoring costs, progress of operations, and related activities. The MIS comprises the following components:

- *The Master Activity Schedule (MAS)* is a Primavera-based project management application that documented the activities involved in planning, preparation, development, data-collection, data-capture, data-processing, data-dissemination, and evaluation activities. It also contained decision-support functionality, including critical path analysis.[74] System users provided the status data and used the MAS as a "roadmap" for decennial census activities. The MAS also recorded the planned and actual start and finish dates for more than 5,500 activities in Census 2000.

[70] U.S. Department of Commerce, Bureau of the Census, *Information Technology Operational Plan*, 1998–2002, for the Decennial Census, November 7, 1997, p. 36.
[71] U.S. Department of Commerce, Bureau of the Census, Decennial Management Division, *Census 2000 Operational Plan*, Dec. 1998, pp. 1–4.
[72] U.S. Department of Commerce, Bureau of the Census, *2000 Operational Information Technology Plan,* p. 44.
[73] The feeder systems contain the Master Activity Schedule, the Operation Control System 2000, the Pre-Appointment Management System/Automated Decennial Administrative Management System, the Operations Control System, the Decennial Master Address File, the Address Listing Capture Operations, the Accuracy and Coverage Evaluation 2000, the Headquarters Processing System, and the Data-Capture Centers' Management Information System. U.S. Department of Commerce, Bureau of the Census, *Information Technology Operational Plan*, 1998–2002, for the Decennial Census, November 7, 1997, p. 37. Also U.S. Department of Commerce, Bureau of the Census, *2000 Operational Information Technology Plan*, p. 45.
[74] U.S. Department of Commerce, Bureau of the Census, Decennial Management Division, *Census 2000 Operational Plan*, Dec. 1998, pp. 1–4.

- *The Cost and Progress System (C&P System)* was a data management system that allowed users to query the data warehouse for information on the costs and progress of Census 2000 activities. The C&P System produced predefined reports on the progress and cost of major data collection, data capture, and data processing operations for Census 2000. System users of the C&P System had access on a "read-only basis and were able to analyze the information on the server or create data extracts to download for analysis."[75]

In addition to reviewing the MIS systems, the contractor also evaluated the use of the Census 2000 Cost Model during Census 2000:

- *The Census 2000 Cost Model (Cost Model)* was a financial model that the DMD Budget Office staff used to model the projected financial requirements necessary to support decennial census operations.

How effective were the Cost Model/Budgeting System, the C&P System, the MAS, and other analytical tools? How well did they work, in terms of (a) the timeliness of their development and their products; (b) ease of use and accessibility to managers; (c) the accuracy of their products; (d) flexibility in adapting to changes; and (e) acceptance among managers within and outside of the decennial census? What were the problems associated with not having full integration between (a) the Cost Model and budgeting systems and (b) the C&P System and Master Activity Schedule? How can full integration be achieved?

13.1 Common Themes on the MIS Used for Census 2000

The contractor's assessment of the MIS begins with a discussion of the themes that consistently emerged from the interviews. In general, interviewees commented that it was useful to have access to data through the MIS and that the applications were generally effective (n=17, c=30). While the MAS helped the participants to understand the interdependencies among the activities performed by the participating divisions, the C&P System provided cost and schedule data in the same place for the first time.

In specific areas, however, interviewees perceived problems with the system (n=13, c=25). They commented on their desire for more user-friendly interfaces and for capabilities that would allow them to access desired data without having to understand the technical aspects of the system.

Interviewees commented that inconsistencies in data definition and a lack of quality control led to data discrepancies (n=10, c=12). There was a perception that a lack of full integration between the C&P System applications and the Field Division's internal reporting system contributed to data-consistency problems (n=8, c=10). The discrepancies led many users to

[75] U.S. Department of Commerce, Bureau of the Census, *Information Technology Operational Plan*, 1998–2002, for the Decennial Census, November 7, 1997, p. 36.

distrust the data produced by the MIS and to rely on information produced outside of the decennial management information systems. The problem stemmed from the timing of when data were pulled from the feeder systems, and also from a lack of common variable definitions.

Interviewees commented on the difficulty of understanding the reports from the information system, which limited the system's effectiveness in supporting decision making for the individual users. Interviewees also commented that the MIS components may have been useful tools for the DMD, but that they did not necessarily produce information that was useful to the operating divisions (n=6, c=8).

13.2 The Master Activity Schedule (MAS)

The Master Activity Schedule (MAS) is the component of the Management Information System that provides the functionality to manage the project schedule for the decennial census. The system is built in Primavera and provides the project management capabilities that are standard in a high-end commercial off-the-shelf (COTS) package. Customization of the system is somewhat limited to queries and reports defined by users. Management of the MAS is the responsibility of the Decennial Management Division (DMD), which has program management and coordination responsibility for the decennial census. To maintain control of the information in the MAS and to ensure that all changes are properly vetted before input, DMD maintains the schedule. Performing divisions typically maintain more detailed project schedules to manage their daily activities, while using the MAS to provide a more global view. These detailed schedules are not interfaced with the MAS, but the information is tied to upper-level information in the MAS. The Census Bureau designed the MAS as a roadmap to help manage the conduct and integration of the many Census 2000 activities. The MAS provided managers with weekly schedule status updates and made them aware of the interdependencies between activities and the impacts of changes to the schedule.

Thirty of the 52 interviewees commented on the MAS (N=30, C=80). Although some interviewees said that they felt that the MAS was an effective tool for understanding the integration and interdependencies among the decennial census activities (N=14, C=24), they found that it was difficult to use (N=18, C=34).

13.2.1 MAS Requires a System Champion

The DMD's use of the MAS did succeed in serving some of the purposes described in the *Census 2000 Operational Plan.*[76] In spite of this, user acceptance was not widespread among the participating divisions because of perceived difficulties in using the system and the lack of a system champion at the Executive Staff level.

[76] "The MAS will assist in planning, preparation, development, data collection, data capture, data processing, data dissemination, and evaluation activities, as well as decision-support functions for Census 2000." U.S. Department of Commerce, Bureau of the Census, Decennial Management Division, *Census 2000 Operational Plan*, Dec. 1998, pp. 1–4.

13.2.2 Effectiveness of the MAS

Some interviewees commented that the MAS was a valuable tool because it listed the activities that needed to be completed for the decennial census and became a useful road map for coordinators and managers (n=8, c=12). Nine interviewees said that the MAS "forced both the technical (operational) and program planning groups to discuss their activities and map out [the interdependencies]" (n=9, c=13).

In an effort to gather the necessary programmatic information from all participating divisions, census staff members participated in a series of meetings, or "lockups," over a six-week to eight-week period. Nine interviewees commented on the MAS lockups (n=9, c=11). While some interviewees perceived these meetings to be a waste of time and a painful exercise, others commented that the lockups were a necessary exercise and were useful in creating an understanding of divisional interdependencies and in generating plans for Census 2000. Specifically, new staff benefited from an increased understanding of the integration of activities among the participating divisions and how the overall decennial census worked.

13.2.3 Timeliness of MAS Development

Seven interviewees commented that the MAS should have been in place earlier in the decennial census cycle (n=7, c=7). For Census 2000, the MAS was completed by the summer of 1997. Interviewees suggested that the MAS should be completed by the "04" year and should be updated after the tests and dress rehearsals as needed throughout the decade.

13.2.4 Ease of Use and Accessibility of the MAS

Eight interviewees commented on the difficulties encountered in using the MAS (n=8, c=12). They mentioned that the system was difficult to use and took too much time to maintain. Interviewees called the MAS "clunky" and the process "a punishment."

Many of the Census 2000 participants did not use the MAS because they felt that it contained too many levels of detail. Ten interviewees stated that the MAS contained too many line items, which caused them difficulties in keeping the system up to date (n=10, c=13).

In addition, interviewees perceived that the data were inaccurate. Decennial census program managers commented that it was difficult to obtain buy-in from the participating divisions because many of the participants did not believe that the data being fed into the MAS were accurate.

13.2.5 Flexibility in Adapting to Changes

Some system users expected that the MAS would be used to support change control during Census 2000; this process unfortunately did not occur. "The MAS was to be updated with a collaboration between the operational program managers, and the Census managers and staff in

participating divisions and offices."[77] One of the purposes of the MAS, according to the *Roles and Responsibilities* document,[78] was to provide a baseline for changes, and changes made to the MAS were to be reflected in the other MIS components and the Cost Model.

Ten interviewees perceived the MAS to be an outdated system with inflexibility in handling changes to dates (n=10, c=13). There are two primary explanations for the inflexibility of system dates in the MAS:

> First, interviewees commented that DMD program managers required the system users to put dates to activities "whether or not the dates could be met." The system contained a feature that allowed the administration to manually change planned dates to actual dates when approved by the DMD program manager. This feature prevented Census 2000 participants from using the MAS initial plan as a baseline and performing variance analysis on planned versus actual implementation progress. By not having a baseline, the decennial census participants did not keep a paper trail or record of changes made to the original schedule.[79]
>
> Second, Census 2000 participants perceived that when dates were changed, task start and end dates were changed without a full understanding of the cascading effect that a particular change would have on other tasks. When making changes to the MAS, managers should be provided with information that will help them to understand the impacts of changes to all areas. They can then work with managers from other impacted areas to discuss how the changes should be made to the MAS.

13.3 The Cost and Progress System (C&P System)

The Census Bureau designed the C&P System to produce daily reports on the major census activities which include all major data collection and capture operations in the field,[80] as well as the costs and completion rates of scheduled tasks. C&P information is extracted from feeder systems, including the Cost Model, the Data Capture System, the Operations Control System (OCS), the Master Activity Schedule, and PAMS/ADAMS (Pre-Appointment Management System/Automated Decennial Administrative Management System).

New segments of users and data were added to C&P in "phases" as each new operation began. Each received a combination of reports set up for its specific use. C&P reports from the data warehouse displayed summary or aggregate material updated on a daily or weekly basis as needed.

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[77] U.S. Department of Commerce, Bureau of the Census, Decennial Management Division, *Roles and Responsibilities of Census 2000 Participants*, 1998, p. 15.
[78] "The DMD or Operational Program Manager is responsible to ensure that the resolution/change is properly reflected in the MIS, budget/cost model, and PMPs." U.S. Department of Commerce, Bureau of the Census, Decennial Management Division, *Roles and Responsibilities of Census 2000 Participants*, 1998, p. 10.
[79] Census 2000 change control procedures are discussed in Section 5 of this report.
[80] U.S. Department of Commerce, Bureau of the Census, *2002 Operational Information Technology Plan*, p. 18.

A total of seven interviewees had comments on the C&P System (N=7, C=8). The interviewees mentioned concerns regarding the need for additional levels of detail in the system (n=4, c=4) and improved data accuracy (n=4, c=4).

13.3.1 Effectiveness of the C&P System

Four interviewees commented on the effectiveness of the C&P System (n=4, c=4). System users commented on the limited reporting options regarding the specific operations costs and suggested that the need for census participants to "manipulate source data to obtain their desired management information" was a critical weakness of the system's functionality. Interviewees perceived that the system was "cumbersome to use" and that the inconsistent definition of terms throughout the system caused difficulties for users in understanding the information produced.

13.3.2 Accuracy of the C&P System

Four interviewees expressed concern regarding the inaccuracy of data produced by the C&P system (n=4, c=4). They said that "varying data sources in the agency provided different costs and progress reports." The data from the C&P System were often inconsistent with data in the other systems, which caused census participants to distrust the C&P System's data. Many of these problems resulted because the requirements definitions established by DMD did not compare to those used by divisions with their own reporting systems, specifically the Field's system.

13.4 The Census 2000 Cost Model

In addition to reviewing the MIS, the contractor evaluated the Census 2000 Cost Model in this section.

The Census Bureau created the Census 2000 Cost Model to automate the estimating processes for Census 2000 staffing and budget requirements in an effort to improve the quality and accuracy of its cost estimates. The Cost Model is based on a well-defined set of activities for the major components of decennial census operations and was used to respond to inquiries from Congress, the Department of Commerce, the Office of Management and Budget, senior managers at the Census Bureau, and other stakeholders.[81] The DMD used the Census 2000 Cost Model as the primary repository of assumptions and parameters for forecasting components of the budget.[82]

13.4.1 Effectiveness of the Census 2000 Cost Model

The 16 interviewees who commented on the Cost Model disagreed on its usefulness (N=16, C=25). Some did not understand that the Cost Model was not a user application. The interviewees were pleased to have the first "budget justification model" in decennial history,

[81] U.S. Department of Commerce, Bureau of the Census, Decennial Management Division, *Census 2000 Operational Plan*, Dec. 1998.
[82] U.S. Department of Commerce, Bureau of the Census, Decennial Management Division, *Roles and Responsibilities of Census 2000 Participants*, 1998, p. 16.

but they believed that the model's effectiveness could be improved if it allowed for "what if" analyses, scenario planning, and the ability to create reports customized to a user's specific needs. Interviewees commented on their inability to compare the data between the C&P and cost model systems and expressed the desire that line items in the two systems be consistent.

13.4.2 Accuracy of the Model

Management evaluation interviewees had two views on the accuracy of the Cost Model:

> First, the Cost Model provided system users with a means to understand the budget assumptions (n=5, c=6). Some of the interviewees perceived that the assumptions were accurate, claiming that they "finally had control and knew what assumptions the budget was based on." Booz Allen Hamilton performed a verification and validation of the Cost Model that supported the perception of the model's accuracy.[83] System users also perceived the budget assumptions to be clearly defined, which gave them confidence in the data's accuracy.
>
> On the other hand, some of the interviewees commented that the Cost Model lacked accuracy and was used by the DMD as a showpiece and communications tool for external stakeholders (n=7, c=9). They commented that the Cost Model did not meet operational requirements. Some interviewees disagreed with some of the assumptions used by the DMD in the development of the Cost Model and questioned the model's validity because these assumptions were not documented. Specifically, the Field Division modified the DMD Cost Model by changing some of the assumptions for the number of staff and time needed to complete certain tasks. For future decennial censuses, the field operations participants would like to have more involvement in making sure that the assumptions in the DMD Cost Model are consistent with the information from field operations.

[83] A separate contractor was engaged to validate and verify the accuracy of the Census 2000 Cost Model.

14. THE USE OF CONTRACTING

Forty interviewees commented on the impact of competitively outsourcing some of the important activities for Census 2000 (N=40, C=235). Census 2000 marked the first time the Census Bureau had made major efforts to outsource any of its decennial census activities. Major contractors included Lockheed Martin, TRW Incorporated, Young and Rubicam, and Electronic Data Systems. In addition to these contracts, the Census Bureau also used other smaller contractors during Census 2000. The use of contractors to outsource key operational activities was perceived by many as a new and innovative approach and as "stepping out of the box" (N=13, C=24). The mid-decade leadership at the Census Bureau supported the use of contractors and new innovation to make it happen. Contracting was also a sizable undertaking because the major activities being outsourced were large, high-value, and complex. The largest outsourced programs were the development of the data capture system and the data processing capabilities, the operation of the telephone questionnaire assistance (TQA) facility, the advertising contract, the field infrastructure contract, and the data access and dissemination contract.

The contractors employed by the Census Bureau brought with them the capabilities and resources to accomplish the objectives (n=2, c=5), including the development and deployment of new technologies. In addition to the improved technical solutions, these capabilities included valuable contract and program management skills (n=9, c=12). The experience of working with contractors on such large and complex outsourcing operations also exposed decennial census management practices that were in need of development and improvement. This is particularly true in the areas of large scale contract and program management. At the inception of the outsourcing contracts, the Census Bureau's procurement and acquisition management programs were not well developed.

This section of the evaluation covers the following findings:

- Some business activities of Census 2000 were outsourced.
- Contractors added many strengths to Census 2000.
- Staff members commented that the use of contractors and their best practices highlighted some internal management weaknesses in decennial operations.
- Census 2000 needed an institutionalized process for defining requirements.
- The internal Census Bureau change control processes were not fully developed.

14.1 Some Business Activities of Census 2000 were Outsourced

The outsourcing activities and contracts management for the data capture, data processing, TQA, and field infrastructure contracts were handled through the Decennial Systems and Contracts Management Office (DSCMO). DSCMO was created in 1995 and was given the responsibility

for contracting for Census 2000 (n=4, c=7.)[84] The DSCMO began outsourcing operational activities during 1996-1997. The two major areas that generated the most commentary from the interviewees concerned the outsourcing of the data capture system and telephone questionnaire assistance operations:

- ***Data-Capture System (DCS 2000) Operations (n=13, c=24):*** The design and development of the DCS 2000 was contracted out to Lockheed Martin. The Census Bureau contracted with TRW to develop and implement the day-to-day operations of the three supporting Data-Capture Centers (DCCs). The comments received in this area related to how the operations worked, with opinions on the strengths and weaknesses of outsourcing (which are presented in sections to follow).

- ***Telephone Questionnaire Assistance (TQA) Operations (n=10, c=11):*** The Census Bureau contracted with EDS to operate the TQA facilities, although the contract was not in place until after the 1998 dress rehearsal. This late award caused problems during Census 2000 because there was insufficient development and testing time available prior to going live with operations.

14.2 Contractors Added Many Strengths to Census 2000

The key advantage of using external resources was that they helped the Census Bureau to strengthen the Census 2000 management practices and processes (n=13, c=24).

- ***Contractors helped to improve management and operational processes (n=9, c=12):*** The contractors positively impacted the internal management of Census 2000. The interviewees commented that contractors like Lockheed Martin and TRW provided rigor and discipline to the management of Census 2000 (n=2, c=2). "The external contractors forced people to make decisions," and staff "were not allowed to change their minds." One of the interviewees cited that making decisions for the contract requirements became a lever to force decision making within the Census Bureau. This was important in helping to mitigate the risks associated with the contract. The interviewees also commented that the contractors possessed the appropriate knowledge and skills to enable them to move quickly up the learning curve toward understanding Census 2000 processes and activities.

[84] According to the *Department Organizational Orders,* "The Decennial Systems and Contracts Management Office shall manage the development and implementation of major Census 2000 contracts, including development and implementation of data capture system, acquisition and hardware, software, telecommunications, and integration services required to support the temporary offices, acquisition of other support such as printing of census forms, and conduct of telephone questionnaire assistance; ensure that all requirements, functions, and system interfaces for contracted systems are identified and compatible; ensure that all hardware and software are adequate and that all charges are controlled; monitor the cost and schedule, and technical performance milestones for each system, and ensure that appropriate standards and supportability requirements are established and met; manage the development of software and systems necessary to support processing and tabulation of census data; be responsible for integration of systems necessary to support collection, processing, and tabulation systems, including management of a Beta site contract to support this integration effort." *Department Organizational Order 35-2B, Amendment 3*, U.S. Department of Commerce, Bureau of Economic Affairs, Bureau of the Census, Effective Date: April 2, 1999.

Transitioning the internal workload to external service providers proved difficult for both the decennial census participants and the contractors. The difficulties surrounding the use of contractors highlighted cultural differences and important issues that needed to be addressed by a change management process.

One of the most important findings was that, at the time of procurement, few contract requirements had been written by the Census Bureau staff (N=23, C=56). Contractors made it clear that they would have to cease operations until certain requirements were defined and more clearly aligned with their contractual obligations. Conducting work that is later found to be outside of scope or inconsistent with requirements could have a negative financial impact on the contractor; therefore poorly defined requirements can create additional risk. A contractor would seek to mitigate this risk by refusing to work under a contractual agreement that did not clearly define the requirements and objectives of the client contracting the services. Problems with the requirements definition process existed on three primary levels:

1. The decennial census staff did not always clearly communicate system and contract requirements to contractors (n=13, c=19).

2. Many system and contract requirements were defined too late, after the Census Bureau staff finalized contracts (n=9, c=15).

4. The Census Bureau did not have the proper processes in place to develop requirements (n=9, c=11). The interviewees commented that people from the National Oceanic and Atmospheric Administration (NOAA) were brought in to assist with contract management/administrative activities (n=5, c=5).

Risks were reduced, and contractors got the job done (n=3, c=3): Contracting with third parties helps to mitigate risk. The overarching reduction in risk occurred in the transfer of Census 2000 operational activities to external service providers, after which those providers were held accountable through their contractual obligations. The contractors conducted their own risk assessment processes and had to follow through with their risk mitigation strategies (n=3, c=3). The contracting schedule was aggressive, but the contractors had the resources to complete their obligations. In addition, contracting out the operations made up for the Census Bureau's lack of experience in areas outside of its core functions, and further mitigated the risk of having to build up and then downsize a large infrastructure.

Census 2000 staff learned about the contracting process (n=2, c=2): As the use of contractors was new to the decennial census management, this represented an opportunity for new business practices and learning. The cost type contracts required the Census Bureau to learn how to do earned value and trend analysis to manage contracts of that magnitude.

14.3 Staff member Comments on Improving Outsourcing

Interviewees held the perception that working with contractors also had certain negative effects on the organization (n=18, c=47):

- ***Impact on internal functions (n=9, c=11):*** Most comments regarding the impact on internal functions were applicable to the systems engineering and programming areas. Responses indicated that staff members in these areas felt threatened by the presence of contractors, feeling that their roles and responsibilities had been taken away from them. The impact was also compounded by decennial management's perception that the internal systems staff and programmers would not be able to successfully complete Census 2000. The tension between these Census Bureau staff members and the contractors impacted the level of support provided to contractors and also the degree to which two-way knowledge and experience was transferred. Interviewees suggested that this tension may have been mitigated in three ways: (1) invest more in orientation and change management (including communications); (2) award the contracts earlier, in an effort to establish a better working relationship; and (3) allow internal staff to compete with the contractors for outsourced work, based upon demonstrated competencies and capabilities.

- ***Inexperience of working with contractors (n=6, c=14):*** Prior to Census 2000, decennial management had little experience in working with contractors on major acquisition-based programs. As a result, established management and operational models were not in place. Contracts negotiation, recognizing the impacts of poor user requirements definition, and weaknesses in change controls on cost were cited as areas of concern. The failure to share and retain knowledge and information and to employ appropriate quality assurance procedures caused further difficulties. In some cases, the quality assurance techniques requested by the Census Bureau were out of date compared to the new technology being introduced. Engaging contractors earlier would have eased some of the tensions by allowing more time for the development of constructive working relationships between the internal and contractor staffs (n=4, c=4).

- Census Bureau programs had limited documentation and software development maturity compared with the contractors. The QA techniques and methods of the contractors were state of the art in comparison with the Census Bureau's, and this caused misunderstandings to occur.

14.4 The Census 2000 Needed an Institutionalized Process for Defining Requirements

Clearly defining user requirements and planning are fundamental to effective program and contracts management. Working to define user requirements is seen as a way of engaging an important group of stakeholders, but it is also the method used by program and contract management to understand what needs to be done to capture the potential risks and issues and to identify critical path activities. Any changes to these defined user requirements must be clearly communicated through the change control process.

More than half of the interviewees commented on requirements definition (n=24, c=64), and nearly a third of those interviewed remarked on the change control process (n=17, c=4). Most of

the comments referred to problems and issues in these areas, although there were some positive comments as well.

- ***Contract management and user requirements processes need to be institutionalized (n=9, c=11):*** The interviewees concluded that despite the success of using contractors, formal processes needed to be in place in many areas of the contract management life cycle. An important lesson learned from their experiences of working with contractors was the need to institutionalize and embed management controls and processes around the use of contractors within the organization. At a minimum, this process should address requirements development, documentation, communication, implementation, and change control. "We need to come up with a blueprint, test, and quality control for requirements development."

- ***Strength and quality technical input to user requirements (n=5, c=7):*** In this area, two important issues were raised by the interviewees. The first issue was that user requirements cannot be defined in isolation and that inputs from group representatives about the organization and its operations need to be included in the definition of requirements. The second issue addresses the types of inputs required to formulate requirements; namely, the group defining the requirements needs to include people with the appropriate levels of relevant technical knowledge. These individuals need to take an active role in the development of user requirements. Non-technical staff may facilitate the development of these requirements, although technical representatives must participate to avoid "people writing requirements [who lack] the appropriate technical knowledge."

- ***Knowledge management (n=4, c=6) and the right inputs (n=2, c=2)*****:** The value and importance of knowledge management were established through the realization that there "must be a clear understanding of what the requirements are, and it should not be one or two people who carried them about in their head or their pocket." The identification and documentation of user requirements are key factors in the contractor's response to, and fulfilment of, those requirements. The requirements definition process also allowed the Census Bureau to model operations conducted internally after similar operations carried out by contractors, using the same approaches and documentation. The clearest illustration of this was the work undertaken by the Census Bureau at the data capture and processing facility at Jeffersonville. Assuming that the contractor is applying best practice techniques, by adopting these practices, the Census Bureau can learn and benefit from them. These tangible benefits provide evidence to support the argument that outsourcing work to contractors does yield measurable value.

  The Census Bureau was also able to capitalize on existing knowledge when developing the user requirements. In at least one case, the Requirements Overview from the Census 1990 were used in the development of requirements for Census 2000. Improvements in the quality and ability to write comprehensive statements of work (SOWs) were also noted.

- ***Timely completion of user requirements (n=9, c=15):*** Defining user requirements is inextricably linked to the program and contracts management planning process. Interviewees commented on the need to develop requirements earlier in the procurement process, and to improve this process as well. One interviewee added that the contracts were drafted before the true requirements were developed. For this reason, many of the user requirements were developed and implemented in real time, which allowed little margin for error, and no time for testing and cost containment. In order to mitigate this risk, the Census Bureau will need to set up contracts farther in advance for the 2010 Census.

14.5 The Internal Census Bureau Change Control Processes were not Fully Developed.

The Census Bureau change control process focuses on the management and programmatic impact of making changes to the costs, schedule, and requirements for the fulfilment of user requirements established in the underlying contract. A quarter of the interviewees commented on the change control process, and none with favorable remarks (n=17, c=41). Nonetheless, some comments recognized that efforts were being made: "We tried to use the concept of change control [though] it was a little less formal; we had daily conference calls." The comments regarding the change control process can be categorized broadly in three areas:

- **Changes were reactive and not proactive (n=9, c=10):** Interviewees perceived that changes were event-driven. They indicated that there were unanticipated or unplanned changes to contractor operations that resulted in changes to the underlying contract in the form of change orders. The interviewees felt that they never really had control of the change control process.

- **Changes in requirements drove up costs (n=8, c=10):** The contractual obligations were based on a "cost plus" contract vehicle; therefore, any changes to the original requirements required a change order, which is priced separately from the original contract and added to the contract scope and value. One Branch Chief noted that "people began to realize that the processes contractors were being paid for were expensive [and] that the lack of schedules and requirements made contracts even more expensive." Finally, the process for changing contracts was easier to talk about than to put into practice. Change orders added a necessary administrative layer to managing a contract, and making these changes was difficult to achieve. It is important to note, however, that with scant requirements, a cost type contract allows for operation with Task Orders. The extra administrative burden is generally accepted as the trade-off. In this situation a strong change control process is critical.

- **Changes were not documented (n=11, c=17):** Maintaining critical records and documenting decisions are essential for sound program and contract management. Documentation was cited as being weak in setting a baseline of user requirements (n=2, c=2) and in documenting changes as part of a rigorous change control process (n=9, c=15).

15. SPECIFIC FINDINGS AND RECOMMENDATIONS

In the sections that follow, the major findings and recommendations in each of the evaluation areas are reported. The text briefly summarizes the major findings and is followed by a list of recommendations for each evaluation area. More detailed descriptions and explanations of both the findings and the recommendations are included in the body of this report.

15.1 Findings on Political Environment

Of the 52 interviews conducted, 41 people commented on the political oversight with 116 individual comments (N=41, C=116). Interviewees reported that the strategic direction for conducting Census 2000 operations was significantly impacted by political tensions between the legislative and executive branches throughout the decade. With conflicting guidance over what census approach to follow and minimal funding in mid-decade years, the Census Bureau had little to show in terms of detailed implementation plans as the years wore on. As a result, the Census Bureau incurred more oversight requirements from more stakeholders than during any of the previous decennial censuses. At first, the Census Bureau was ill-prepared to manage external stakeholder relationships and to handle all of the inquiries. Responding to the volume of inquiries seriously impacted Census 2000 personnel's ability to complete their workload. When the census was conducted, however, the Census Bureau leadership team of Ken Prewitt and Bill Barron stepped in and modified the leadership approach in order to respond more effectively.

15.2 Recommendations on Political Environment

- **Continue to develop a pro-active leadership strategy (as determined by the Executive Staff) to anticipate and respond to political oversight requirements and to update strategic contingency plans:** By maintaining close coordination with core external constituencies, the Census Bureau Executive Staff would be in a better position to anticipate changing requirements and to influence Congressional decisions on strategy and funding levels. Developing and updating contingency plans for political developments or technological advances would serve to insulate decennial census Executive Staff from being unprepared for last minute reversals, as occurred leading up to Census 2000.

- **Plan for the decennial census divisions to effectively respond to oversight requirements:** Late in the decade, some decennial census participating divisions had dedicated staffs to respond to external oversight inquiries. This response relieved the operational staff from having to respond to inquiries and facilitated a more effective response to stakeholders.[85]

[85] Ibid.

- **Provide resources and training on managing oversight relationships:** As oversight requirements increase, the Decennial Census Directorate should identify and train dedicated staff members to effectively respond to external inquiries or to provide supporting responses to the census communications office. These staff members should be familiar with the legislative and budgeting processes of the federal government and its constituencies, and have program specific experience and knowledge regarding the decennial census.

- **Improve the management of knowledge regarding census plans and strategic options:** Documentation on previous decennial census operations (sampling and traditional enumeration) should be completed and stored in a technology database that is easily queried. Previous requirements, inquiries from congressional and other stakeholders, and Census Bureau responses should be downloaded to an electronic database for easy access.

15.3 Findings on Funding

Thirty-seven of the interviewees made a total of 76 comments with respect to funding and its impact on Census 2000 (N=37, C=76). Interviewees reported that funding for decennial operations was minimal throughout the decade until just before Census 2000 operational years. Consequently, the Decennial Census Directorate was unable to maintain a core base of staff members and suffered a significant loss to the knowledge base. Although there was a decennial budgeting cost model in place in the mid-90s, the strategic development of a defensible budget strategy, supported by rigorous financial analysis, was not undertaken until later in the decade.

15.4 Recommendations on Funding

- **Promote census funding on the basis of a continuous 12-year operation that includes planning, testing and evaluating procedures in mid-decade years:** The execution of the decennial census consists of strategic planning, organization, design, mobilization, two tests, a dress rehearsal and continuous evaluation, all leading up to the full decennial activity. The decennial census processes should be reviewed and funded in accordance with its full 12-year cycle.

- **Secure base funding for core decennial activities throughout the decade:** Although most of the funding for the decennial census occurs at the end of the decade, a core base of funding should maintain a "steady-state" of decennial operations in order to protect the knowledge base and to support mid-decade operations.

- **Continue to support funding requests with rigorous financial analysis:** The budget requests for Census 2000 were supported by a financial cost model. The Census Bureau should continue to develop rigorous financial assumptions and cost model methodologies to support future requests.

15.5 Findings on Staffing

Fifty of the fifty-two interviewees commented on problems with headquarters staffing during Census 2000 with a total of 299 comments (N=50, C=299). Interviewees reported that in the decade leading up to Census 2000, the Decennial Census Directorate was plagued by strategic reversals, from both inside and outside the organization. One result of this was a lack of funding until just before the Census 2000 operational years. Though the decennial organization suffered the consequences of these reversals in many ways, it was particularly hard hit at Census Bureau Headquarters in human resource management and staffing.

In the course of the evaluation, the project team identified the following concerns regarding headquarters staffing for the decennial census: 1) delays in funding resulted in inadequate numbers of skilled and experienced resources and a critical erosion of the knowledge base, and 2) recruitment and retention challenges exacerbated the problem.

15.6 Recommendations on Staffing

- **Apply funds toward securing a core decennial area staff throughout the decade:** Decennial funds, secured earlier in the decade, should be applied toward maintaining a core staff within the Decennial Management Division (DMD) and other participating divisions within the decennial organization throughout the decade. The DMD staff would develop requirements and budget, and coordinate, integrate, and monitor testing, evaluation and dress rehearsal program leading up to the 2010 census. They would also serve to maintain the decennial census knowledge base. Staff in participating divisions would work on requirements and implement the testing, evaluation and dress rehearsal program and thus also maintain decennial census knowledge and expertise.

- **Identify core competencies for personnel in key positions:** Key decennial census participants should be technically capable and should also possess strong management skills. Because of the fluid nature of the census, these individuals should also demonstrate characteristics such as dedication, flexibility, innovation, and good interpersonal skills.

- **Ensure that DMD staff members have previous census experience and/or adequate training:** Many of those interviewed commented on the lack of decennial experience or training among the DMD staff. The Census Bureau environment should be conducive to providing decennial experience to junior Census Bureau personnel and should also provide training to staff members who participate on a temporary basis. Temporary appointments should be initiated sooner in the Census cycle to ensure that there is adequate time allotted for training.

- **Promote dynamic working relationships by ensuring that key personnel work together through decennial tests and dress rehearsal:** Establishing teams who worked through issues during the testing and dress rehearsal years was perceived by interviewees as critical to the development of effective and efficient working relationships for the decennial census. These teams need to understand how their efforts fit into the integrated

strategic plan, should have clearly defined objectives, deliverables, and schedules, and should have a designated lead to make decisions or recommendations.

- **Continue to round out staff within the Decennial Census Directorate with term employees, but provide adequate training and guidance:** Term employees were used successfully to increase staff resources in the course of the decennial cycle, but interviewees determined that these individuals' usefulness was limited as they were not experienced or trained in decennial operations. Term employees should be subjected to a course of training in Census Bureau and decennial operations at the start of their employment, and should also be hired earlier to ensure adequate time for this training.

15.7 Findings on Leadership

Of the 52 individuals who were interviewed, 44 commented on certain aspects of leadership with 169 total comments (N=44, C=169). Interviewees reported that the senior leadership had changed many times throughout the decade. The contractor determined that over the 12-year cycle, there were four Census Bureau Directors, at least three Deputy Directors, the creation of two Principal Associate Directors in 1996, another change to the Principal Associate Director for Administration and CFO in 1997, and three Associate Directors for the Decennial Census; this totals 13 decennial Executive Staff changes.

In general, interviewees perceived that each new leadership change, both at the Director and the Decennial Census Directorate levels, accompanied a change in internal approach. This, coupled with the greater strategic battle over sampling versus traditional enumeration strategy, caused the leadership's message to be perceived as inconsistent and unfocused. Many of the Executive Staff did not have decennial experience. Later in the decade, however, the executive management team was perceived by some to have been much more focused and effective (n=5).

15.8 Recommendations on Leadership

- **Minimize, to the extent controllable, changes to leadership positions and priorities:** Changes to leadership positions at the Executive Staff and directorate levels caused significant confusion and reversals to decennial priorities as the decade progressed. The Census Bureau should try to maintain more continuity of leadership, particularly in the latter years of the decade leading up to the decennial census.

- **Clearly communicate Executive Staff vision, values, priorities and direction in order to nurture an integrated decennial culture:** Communication on priorities internally to staff participating in the decennial census should be as important as communicating externally to outside stakeholders. With clear communication of the vision, values and priorities, the decennial organization would have a better chance at developing a distinct coordinated and mature culture.

15.9 Findings on Organizational Structure & Management Approach

Of the 52 individuals interviewed, 50 interviewees made a total of 450 comments on the management approach of the Census Bureau as pertains to the conduct of the decennial census (N=50, C=450). At the highest levels of the Census Bureau's organization, the Field Division has a separate reporting chain from the Decennial Management Division and the rest of the Decennial Census Directorate and other major participants. Interestingly, ten individuals commented on the separation of planning and resource management from operations in the organizational structure. The Executive Staff overwhelmingly supported maintaining the existing structure but division and operational level staff supported moving decennial-related field operations to the Principal Associate Director for Programs. The issue of whether to consolidate decennial Field staff within the Programs Directorate is a contentious one. Either structure has advantages and disadvantages.

Thirty-eight interviewees reported that the "matrix" approach, implemented earlier in the decade, was not effectively implemented and did not provide a mechanism for overall program coordination and integration across and among participating divisions. Twenty-two interviewees said that the matrix approach should include a strong centralized management component in order to properly coordinate participants and to integrate the planning and execution of the decennial census. There was strong support for the Decennial Management Division to take on the integration and coordination role, which occurred later in the decade; of the twenty-two who commented, twelve individuals said that the centralized approach worked better than the matrix approach, while ten stated that the centralized approach is the only one that could achieve program coordination and integration objectives.

15.10 Recommendations on Organizational Structure & Management Approach

- **Define, communicate and enforce roles and responsibilities before the planning and design phases of the decennial census cycle:** Changes in decennial leadership, strategy and management approach caused significant confusion regarding the roles and responsibilities of decennial staff members and members of the participating divisions throughout the decade. Clearly defining roles, clarifying lines of authority, outlining areas of responsibility and ensuring that reporting lines are aligned to avoid end-runs should improve accountability and result in improvements to the designing, planning and decision-making activities for the decennial census.

- **Continue with the "centralized" management component that fulfilled the desired results of matrix management:** The centralized component consisted of a strong and appropriately staffed DMD structure serving as coordinators and integrators of decennial census program areas with the cooperation of the participating divisions. It is, in fact, the approach that represents true matrix management because it features a more robust DMD on the y-axis counterbalancing and coordinating the interests of the participating divisions on the x-axis.

- **Recognize the need to switch from a teaming approach for planning and resourcing activities in the years early in the decade to a more command and control approach when decennial census operations begin:** What happened at the Census Bureau in the late 1990s was none other than an attempt to do planning and service delivery at the same time without changing the management approach. An understanding of the use of different management approaches to achieve different results will go a long way toward alleviating some of the confusion that accompanied the Census 2000.

- **The PADs each have the responsibility to represent the interests of their directorates, as well as the interests of the greater census organization.** Under the current organizational structure, the PADs may find themselves in situations where their interests in representing their directorates are at odds with the interests of the greater Census Bureau organization. The Director should act as the coordinating point between the two directorates, to mitigate challenges in areas of potential conflict of interest.

15.11 Findings on Decision-Making

Of those interviewed, thirty-five interviewees made 98 comments on the decision-making processes (N=35, C=98). Decision-making, whether under the matrix or centrally managed approach, provided challenges to managing the decennial census. Under the matrix approach, poor organization resulted in an inability to reach decisions and to make tangible progress. The centralized management approach, though better organized than the matrix approach, was beset by its own set of decision-making challenges. Interviewees reported that because of the inexperience of both the Decennial Management Division staff and the Census 2000 leadership late in the decade, decision-making was strongly controlled within the offices of the Associate Director and the Assistant Director for Decennial Census.

15.12 Recommendations on Decision-Making

- **Provide working groups and operational teams with a decision-making mechanism that is enforced and supported by superiors:** In analyzing some of the documentation describing the organization of the teams and working groups involved in the decennial census, it is clear that they were inadequately designed from an organizational perspective for coming to conclusion on issues. A true chairman, endowed with final decision-making or recommendation-making authority to the next level, would have had the authority to arbitrate disputes and enable progress on the important issues under consideration.

- **Avoid allowing decisions to be re-addressed through alternate or unofficial chains of command:** The Associate Director level leadership allowed decision-making mechanisms to be by- passed, which often rendered the structured processes irrelevant. Dual chains also provide a perfect forum for end-runs, when parties involved in a dispute do not agree with a particular decision. This situation may explain why decisions were not perceived to be final, and were revisited even if they appeared to have solved the initial problem.

- **Ensure that authority, responsibility, accountability and capacity are aligned in determining roles and responsibilities throughout the decennial organization:** Perhaps the single most important principle to adhere to for management efficiency is to ensure, for all positions, that areas of responsibility are clearly defined, that individuals are given sufficient authority to make final decisions regarding the activities in their areas of responsibility, and that those same individuals are held accountable to their direct superiors for the success or failure of the activities within their areas. Many of the unanticipated and unintended management challenges, like end-runs and an inability to reach final decisions, result from an improperly structured management approach due to a deviation from this principle. Furthermore, it is not possible to achieve organizational objectives without sufficient capacity. This includes making sure that positions are filled with capable and appropriate individuals and that resources are available to deliver the services successfully.

15.13 Findings on Planning

Of the 47 people who commented on planning (N=47, C=207), 34 believed that there were weaknesses in Census 2000 planning strategy. They felt that the key to census success begins with early planning, but that few concrete plans existed by the end of the decade. Furthermore, some felt that planning needed to be led at a more strategic level[86].

15.14 Recommendations on Planning

- **Complete Program Master Plans (PMPs) and documentation on decennial census operations by the dress rehearsal and update as necessary:** PMPs provide significant documentation on guidance and requirements for the decennial census. They should be drafted before the dress rehearsal and modified as necessary based on the lessons learned. The modifications from the dress rehearsal should be completed before the census.

- **Complete more detailed activity schedules earlier in the decade before testing:** Developing detailed preliminary activity schedules before the testing phase is important to ensure that the key activities have been considered and integrated into the end to end strategy.

- **Encourage Field Headquarters to involve the regional staff in the planning phase earlier in the census cycle:** Involvement of the Field Division's Regional Offices in planning is crucial to ensuring that plans are "operable" and that both field and headquarters eventually implement strategies under the same general framework.

- **Continually monitor risk and conduct contingency planning both strategically and at lower levels in the planning processes:** Interviewees stated that contingency

[86] Interviewees indicated that they thought that the Executive Staff could have taken a more active role in decennial planning.

planning might have enabled the Census Bureau to react more effectively to the decision to pursue the traditional census approach.

15.15 Findings on Human Resources Management

A significant number of interviewees (N=26, C=69) mentioned the importance of succession planning, career development and management training to better prepare and equip staff members for conducting the next census. They strongly supported the need to better prepare junior employees for future management roles.

15.16 Recommendations on Human Resources Management

- **Provide training on project management:** In planning for the next census, Census Bureau leadership should develop a formal management training plan to train individuals for managerial positions and a career development plan for the professional development of staff.

- **Strategically recruit managers who have decennial census knowledge and experience and develop retention strategies:** Introducing strategic recruiting and developing retention strategies should work to maintain the decennial knowledge base.

- **Promote managers based on both technical competence and management skills:** Many interviewees stressed the need for the Census Bureau to focus more on rewarding good management skills rather than just technical skills.

- **Identify long-term rewards for individuals participating in the decennial census from other divisions:** Career plans and promotions should reward thought leadership[87] and demonstration of the ability to stretch capabilities as workers and as managers. Criteria for promotion could include competencies such as thought leadership, management skills and training and the ability to demonstrate flexibility and creativity in a fluid situation.

- **Minimize career impediments to individuals participating from other divisions:** In the staffing section, interviewees stated that some long-term Census Bureau employees are not enthusiastic about working on the decennial census. Minimizing long-term career impediments and improving communications could improve this trend.

- **More fully develop career plans for non-Mathematician/Statistician personnel:** Career development plans should be developed for all key career paths within the Census Bureau and decennial participating divisions.

- **Provide rotational assignments in testing and dress rehearsal years:** Testing and dress rehearsal years provide decennial management with the opportunity to cross-train

[87] A management concept where leadership is based on the quality, application and purpose of thought, coupled with industry knowledge and experience.

key personnel in other areas of census planning and operations. Field implementation experience was cited by some as critical to the skill set of those coordinating the planning in the Decennial Census Directorate.

- **Implement succession planning:** The Census Bureau leadership should also develop a well-defined succession plan as many key employees are close to becoming eligible for retirement.

15.17 Findings on Internal Communications

Census Bureau leadership had a challenging task in managing communications because of the sheer number of stakeholders who needed to be kept informed of the information and events that were unfolding during the census cycle. Thirty-five of the fifty-two individuals interviewed commented on the challenges in the communications area (N=35, C=95). The decision-making mechanisms, lines of authority, and individual roles of the strategic planning participants were not clearly defined, and as a result, internal communications were not very effective. There was no clear communications strategy or approach for handling internal communications among the decennial staff members early in the decade. In order to improve internal communications, it is important for the leadership to clarify communications, lines of authority, and areas of responsibility in order to ensure that an appropriate internal structure for communications is in place. Census Bureau leadership must also make certain that the Associate Director (AD) for Decennial Census assumes responsibility for coordinating internal communications among the division chiefs and decennial census managers and develops a strategic internal communications capability, using a consistent and replicable approach.

15.18 Recommendations on Internal Communications

- **Clarify communications lines of authority, areas of responsibility, and reporting lines in order to ensure an appropriate internal communications structure:** Decennial Executive Staff should take the initiative early in the census cycle to define lines of authority, decision-making mechanisms, and decision-making criteria for communications issues at each level. They must outline areas of responsibility and ensure that reporting lines mirror delegations of authority in order to hold those with authority accountable for their respective areas of responsibility.

- **Ensure that the AD for Decennial Census assumes final responsibility for coordinating internal communications and for holding the division chiefs and decennial census managers accountable for disseminating information to division staff members:** In order to achieve cooperation among division chiefs, the responsibility for coordinating internal decennial communications to and from the executive leadership must reside at the Associate Director level, one level higher in the reporting hierarchy than the division chief level.

- **Develop a strategic internal communications capability using a consistent and replicable approach:** The AD for Decennial Census should ensure that the communications groups throughout the organization follow the communications strategy

set by the AD for Decennial Census, and also address each of the phases important to the development of an effective communications approach[88]. By considering the components through the four phases, the basis for a successful implementation would be established. In order to ensure that the communications strategy is implemented, the AD for Decennial Census can, for example, tie the achievement of decennial communications goals with individual performance reviews.

- **Develop a knowledge management capability to retain corporate knowledge and to communicate programmatic changes to decennial census participants in a timely manner:** Throughout the census process, one group such as DMD should have responsibility for documenting and communicating the status of activities during the planning and conduct of the decennial census. Program managers could communicate operational deviations from schedule and technical changes to requirements through a change control database that tracks and updates approved changes.

15.19 Findings on Management Information Systems

Forty interviewees commented on the Management Information Systems processes (N=40, C=138). In the assessment of the management information system and tools (MIS), interviewees commented on the usefulness of having data accessible through the various systems. Still, MIS was not universally accepted due to perceived problems with data consistency, system usability, and difficulties obtaining useful management reports. To improve upon the MIS tools, it is important to develop an information technology vision that is consistent with the goals of the strategic plan. In addition, the Executive Staff and the Decennial Directorate leadership must express their support of the MIS and must work to obtain user buy-in and commitment throughout the Census Bureau. This will help to increase user acceptance and utilization of the MIS for management and decision-making. It is equally important to involve participating divisions in the development of the MIS in order to establish a clear understanding of the MIS components and data outputs.

15.20 Recommendations on the MIS Processes

- **Secure senior level commitment for the systems:** Increased commitment and championing of the MIS by the Executive Staff and Decennial Directorate leadership will help to legitimize the systems and the data. This will help to increase user acceptance and utilization of the MIS for management and decision-making.

- **Develop an information technology vision that is consistent with goals of the Strategic Plan:** The development of an effective MIS strategy begins with the articulation of how information technology assets are streamlined to support business processes and objectives. These should be expressed in a strategic vision and plan.

[88] The four phases of developing an effective communications approach are as follows: 1. Evaluate the environment. 2. Establish Goals. 3. Develop the communications strategy and plan. 4. Implement the communications plans.

- **Determine and document the scope of each system:** It is not necessary for MIS to provide a universal solution for all issues surrounding the cost, progress, and schedule of the decennial census. The Census Bureau should clearly define the functionality of the MIS so system users will have a clear understanding of what functions they can expect the MIS to perform.

- **Involve participating divisions in the development of the MIS:** User acceptance would increase if participating divisions had more involvement in developing system requirements. User acceptance levels would increase if certain functionalities were incorporated into the system. These include: having an additional level of detail that is specific to the participating divisions, having systems that are easier for users to navigate and make changes to, and allowing users to have increased flexibility in the level of reporting.

- **Define a Decennial Change Management and Change Control methodology that includes MIS:** User acceptance of the MIS would increase if a decennial change management and change control plan was implemented, which covered the census participants' transition to use of the MIS. The plan would allow users to gain an understanding of each system's function and would include a plan for change that is based upon clear and consistent internal communication.

- **Increase user training and begin training earlier in the decennial census cycle:** Increased training would help users to better understand the functionality of the MIS. Earlier training on the systems would help staff in participating divisions to increase their acceptance and understanding of the MIS components.

- **Get a clear agreement on data definitions and ensure like terms are used consistently among the systems:** System users encountered problems that stemmed from the inconsistent use of terms throughout the Decennial systems. A clear set of data definitions, as well as proper identification of feeder system naming conventions, will help to ensure a better understanding of data outputs.

- **Institute an effective quality control process so data in the feeder systems are trusted:** User acceptance is based on trusting the data produced by the MIS. Data produced by the MIS feeder systems are consistent within each system's own environment, however not all systems are perfectly aligned in real time to allow for consistency throughout the entire system. Ensuring that all data and data sources are clearly defined so that a user can identify what the data represent, where it came from, and how current it is will increase user confidence in the MIS.

15.21 Findings on Large Scale Contracting

Census 2000 marked the first time that the Census Bureau had made an effort to outsource a large number of major decennial census activities, and many at the Census Bureau perceived this to be a new and innovative approach. Forty interviewees commented on the impact of competitively outsourcing some of the important activities for Census 2000 (N=40, C=235).

Although contractors brought in new skills and competencies to the Census Bureau that helped to improve management and operational processes, many staff members also believed that the practice of outsourcing also highlighted weaknesses in the Census Bureau's operations. Because staff members within the Census Bureau were unaccustomed to working with contractors, the management and operational models used to structure this type of working relationships were not in place. For example, the internal Census Bureau change control processes were not fully defined, so the Census Bureau deferred to the change control practices used by the contractor. These operational challenges contributed to the Census Bureau's difficulty in integrating best practices, new technologies, and knowledge transfer techniques into other areas of the Census Bureau.

15.22 Recommendations on Large Scale Contracting

- **Consider how risks can be reduced through contracting:** Contracting with third parties shares and mitigates the risks to the Census Bureau from using new technology in the decennial census. This risk mitigation was particularly advantageous, given the broader context of what was achieved with Census 2000 and given the scale and complexities involved.

- **Define user requirements as the foundation of contracting and program management:** Using contracts and outsourcing activities forced the Census Bureau to make decisions, to define requirements, and to commit to the terms and conditions of the underlying contract. Very often the contracts were let out before the business and technical requirements were fully defined. The contractors followed CMM principles in their developmental processes and needed to have decisions made with sufficient time to adequately develop and test their systems. The Census Bureau culture regarding internal development, however, had historically supported changes until the last moment. In the new contracting environment, defining requirements and supporting last minute changes tended to drive up costs. It becomes fiscally important that the Census Bureau, as a steward of the public trust, have generally defined business and technology requirements as fully as possible before entering into contractual arrangements.

- **View large contract management as a skilled discipline, requiring training and education on new skills and competencies:** The existing contracting and procurement function did not initially have the capacity or capability to handle large, complex procurements. The experience of working with contractors on such a large, complex outsourcing of operations exposed the decennial census staff to new management practices, particularly in the disciplines of contract and program management.

- **Address cultural differences using "change management" practices and techniques that are appropriate to the Census Bureau organization:** Private sector companies operate very differently from government entities. Therefore, transitioning the internal workload to external service providers proved difficult for both the Census Bureau and the contractors. The working relationship between the Census Bureau and the contractors brought to light a number of potential areas for improvement within the Census Bureau's

managerial operations. Change management techniques may involve developing change strategies, a communications plan and training, for example.

- **Consider a two-tiered acquisition strategy:** Many large acquisition efforts follow a two-tiered approach to outsourcing in order to ensure that requirements are defined before large contracts are signed. The first stage includes the definition of the business and technical requirements of the proposed program. The defined requirements can then be incorporated into the second stage, which includes the implementation and operational phase of the program effort. Two-tiered approaches should be paired with strong program management and change control processes.

- **Include a knowledge transfer requirement in large contracting efforts:** In order to ensure that program management expertise is retained within the Census Bureau and that the Census Bureau does not become overly dependent on private sector organizations, the contracts should include a knowledge retention or knowledge transfer clause. Knowledge transfer activities could include developing a training program for Census Bureau personnel, shifting operations from contractor personnel to government personnel, and creating a steering group with a mix of Census Bureau and contract managers.

- **Create change control and risk management committees:** Change control and risk management regimes should be implemented as a means of monitoring project progress and accommodating possible programmatic or departmental changes to an ongoing project. The change control capability will capture a proposed change in a change and risk register, address it at the working group level, elevate the change to project managers if an acceptable solution cannot be identified, identify and evaluate the associated risks, and require the project manager to direct an appropriate course of action.

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APPENDIX A: CRITERIA FOR EVALUATING THE MANAGEMENT APPROACH

The Steering Committee requested that the contractor fulfill the management evaluation requirements in the Statement of Work by evaluating the implemented management approach against the planned approach described in the 1998 Roles and Responsibilities document. Despite the successes of Census 2000 and the fact that the decennial organization eventually ended up with an approach that fit their business model, the contractor conducted the evaluation of the implementation against the 1998 plan. There are several key elements in an effective management approach upon which the contractor based their evaluation. The contractor used the following criteria: [89] 1) clearly defined roles and responsibilities, 2) a viable management approach with appropriate mechanisms to achieve results, 3) the effective deployment and communication of the management approach, 4) the sustained use of the management approach and its components, and 5) the existence of tangible performance results. More extensive discussion of the findings from the interviews is provided in the results summarized below.

Criteria 1: Clarity of Roles and Responsibilities: The project team met with the Steering Committee in an effort to get a better understanding of which divisions within the decennial organization the were responsible or contributed to which operations. During the interview process, individuals indicated that DMD roles were not clear (n=13) and that, as a general rule, the roles and responsibilities for all those involved in the decennial organization were not clear (n=11).

Criteria 2: Management Approach and Mechanisms: The management approach outlined in the Roles and Responsibilities document was deployed, but it lacked key mechanisms for issue resolution. The Census Operational Managers (COM) group was to be a forum through which issues could be initially raised and considered. According to those interviewed, the COM was to be the first step of the issue-resolution process and was to facilitate communications throughout the decennial organization (n=8). Many interviewees, however, considered the COM structure ineffective (N=16, C=21) with some managers bypassing the entire process altogether (n=5). With regard to the design of the IR/CC, the members of the office of the Associate Director for Decennial Census allowed decision-making mechanisms to be by-passed. By allowing dual chains of command to the directorate leadership, the delegations of authority were voided and the leadership effectively rendered the structured decision-making processes irrelevant.

Criteria 3: Deployment and Communication: In the interviews with decennial staff members, there was some awareness of the *Roles and Responsibilities* document within the Decennial Management Division, but little awareness in the rest of the decennial organization. Individuals acknowledged participation in the Census Operational Managers meetings but indicated that they considered the COM structure ineffective (N=16) with some managers bypassing the entire process altogether (n=5). Individuals also acknowledged participation in the IR/CC process, but commented that the people with the necessary knowledge often did not attend (n=8) and that the paper-based process was too time-consuming during census years (n=6).

[89] Criteria for Evaluating the Management Approach (See Appendix A).

Criteria 4: Sustainability of Management Approach Components: In 1999, the COM meetings were discontinued completely. The COM structure was replaced by the daily Operational Status and Assessment (OSAM) meetings, which provided more real-time reporting on decennial census operations. The IR/CC process was sustained through Census 2000, but it was only used selectively. Consensus among the interviewees was that there was very little change control because IR/CC issues were at a very high, more policy related level, while a lot of lower level changes were going on at the same time outside of the IR/CC mechanism.

Criteria 5: Performance Results: Developing strategic and operational plans and risk mitigation strategies should be the core business processes of the decennial organization and management approach leading up to 1998; plans and strategies are the products of these processes. Consequently, the lack of finalized plans and risk management strategies in the years leading up to the decennial census were the results of an ineffective management approach and a lack of staff resources. Interviewees commented that major components of the Census 2000 operation were deployed without testing and evaluation, indicating that there was a deficiency in planning and testing. Most of the Program Master Plans, which were completed before the dress rehearsal leading up to the 1990 census, were not updated or finalized before Census 2000. Interviewees also conceded that the key to the success of Census 2000 was the knowledge base of a core group of census staff members who were supported by the requirements documents from the 1990 census.

APPENDIX B: CENSUS BUREAU MANAGEMENT EVALUATION INTERVIEW ANALYSIS QUICK REFERENCE GUIDE

1.0 Interpreting the Results

This analysis results from 52 management interviews and over 1,700 comments from the interviews. The 52 interviewees consisted of 9 Executive Staff, 13 Division Chiefs, 18 Assistant Division Chiefs, and 12 Branch Chiefs from the Census Bureau. Of the 52 interviews, 22 were from the Decennial Census Directorate, which is broken out as follows 2 Exec Staff, 4 Division Chiefs, 8 ADCs, and 8 Branch Chiefs. The interview results do not specify which directorate a respondent is from as a means to maintain confidentiality. Each bullet point refers to a particular category and contains numbers for N and C. The N refers to the number of people who made comments about a particular topic. There were a total of 52 interviews, so N will not equal more than 52. A capital N indicates that one or more small n's roll up into the larger category. The C's refer to the number of comments made in a particular category.

2.0 Political Environment

Political Oversight (N=41, C=116) includes comments about how external oversight groups impacted the implementation of Census 2000, how the Census Bureau communicated with these groups and the impact on the Census Bureau from the political nature of the decennial census.

Congress (n=19, c=38)

As Congress has become more involved with the decennial census, the process has become more complicated. Congress withheld funds mid-decade until the census operational years approached. (n=19 is comprised of 3 Exec Staff, 7 Division Chiefs, 7 ADCs, and 2 Branch Chiefs)

Impact of Oversight to Processes (n=19, c=24)

The oversight was overwhelming, burdensome, and distracted us from getting our work done. The oversight caused many things to change during implementation. (n=19 is comprised of 5 Exec Staff, 5 Division Chiefs, 7 ADCs, and 2 Branch Chiefs)

The Department of Commerce, the Inspector General, and the General Accounting Office (n=18, c=37)

The oversight from the DoC and the GAO was overwhelming. Poor relationships between the Census Bureau and external advisory groups also impacted these processes. (n=18 is comprised of 3 Exec Staff, 7 Division Chiefs, 7 ADCs, and 1 Branch Chief)

Political Nature of the Census (n=14, c=18)

Politics drives the census. To make the census more successful, we should remove the politics. Congress and Commerce were particularly concerned with the $4 billion price cap. (n=14 is comprised of 2 Exec Staff, 4 Division Chiefs, 6 ADCs, and 2 Branch Chiefs)

The Census Monitoring Board (n=5, c=6)

The Census Monitoring Board was disruptive because many of their visits occurred during enumeration. Some of their comments lacked accuracy. (n=5 is comprised of 1 Exec Staff, 1 ADC, 2 Division Chiefs, and 1 Branch Chief)

The Administration (n=5, c=6)

The Democratic Administration advocated the sampling approach. It created another level of complexity to the political oversight. (n=5 is comprised of 1 Exec Staff, 3 ADCs, and 1 Branch Chief).

3.0 Funding (N=37, C=76)

Not Enough Funding (n=17, c=23)

We never had enough funding. Funding was light early in the decade. There is generally a limited budget between census years. (n=17 is comprised of 4 Exec Staff, 6 Division Chiefs, 4 ADCs, and 3 Branch Chiefs)

Having the Right Amount of Money at the Right Time (n=11, c=11)

We need more money in the early years. (n=11 is comprised of 1 Exec Staff, 6 Division Chiefs, and 4 ADCs)

Enough Resources (n=10, c=15)

Resources existed to procure top contractors. When we finally got to the decennial census, there was enough money. Once the money came in, decisions were made. (n=10 is comprised of 1 Exec Staff, 6 Division Chiefs, 2 ADCs, and 1 Branch Chief)

> *Resources Came in After the Supreme Court Decision (n=8, c=9)*
> "For Census 2000 we spent $1 billion in 9 1/2 weeks to get the job done."
> "Census 2000 was conducted under tightly constrained budgetary environment. Programs could not be staffed up without the money. The funds came in only after the Supreme Court ruling."

Funding Requests (n=9, c=10)

The DMD was an advocate for the divisions in getting funding. In 1999, we requested $1.3 billion and got $900 million. The budget seemed to be in a big black box. (n=9 is comprised of 4 Exec Staff, 2 Division Chiefs, and 3 Branch Chiefs)

Impact of Dual Path on Resources (n=10, c=16)

We had a lack of resources from trying to run two censuses at once. (n=10 is comprised of 3 Exec Staff, 6 ADCs, and 1 Branch Chief)

Selling the Decennial Census to Congress and the Department of Commerce (n=9, c=17)

The Executive Staff needs to do a better job in convincing Congress and Commerce of the need for early planning funding. The Census Bureau is one of the only agencies that does not specifically court the budget examiner from Commerce. (n=9 is comprised of 5 Exec Staff, 3 Division Chiefs, and 1 Branch Chief)

4.0 Staffing & 10.0 Human Resources Management

Personnel resources (N=50, C=299) includes comments regarding hiring processes, career development, decennial census and field experience, and having the right number of staff.

4.1 Census Experience (N=41, C=101)

Census experience includes comments about the results on the impact of not enough people having previous decennial census experience, field experience, or the right skills to implement Census 2000. (n=41 is comprised of 7 Exec Staff, 11 Division Chiefs, 13 ADCs, and 8 Branch Chiefs)

Decennial Census Experience (N=36, C=74) (n=36 is comprised of 6 Exec Staff, 10 Division Chiefs, 13 ADCs, and 7 Branch Chiefs)

Inexperience of DMD Staff (n=20, c=34)
The DMD brought people on board who were not always from decennial or who were not educated on the process. The DMD lacked experience. The DMD needs to develop more technical expertise. (n=20 is comprised of 2 Exec Staff, 5 Division Chiefs, 10 ADCs, and 3 Branch Chiefs)

Experience of Leadership (n=13, c=19)
Few people at the executive level had decennial census experience. (n=13 is comprised of 2 Exec Staff, 6 Division Chiefs, 3 ADCs, and 2 Branch Chiefs)

General Inexperience of the Staff (n=9, c=9)
Many of the new people did not necessarily have the technical knowledge to perform the job. (n=9 is comprised of 1 Exec Staff, 2 Division Chiefs, 5 ADCs, and 1 Branch Chief)

High Learning Curve for New Hires (n=5, c=5)
The decennial census had a steep learning curve for new hires and people unfamiliar with the processes. (n=5 is comprised of 1 Exec Staff, 1 Division Chief, 1 ADC, and 2 Branch Chiefs)

Some Staff had Prior Experience (n=4, c=7)
Some staff and many of the program divisions had decennial census experience. (n=4 is comprised of 2 Exec Staff, 1 ADC, and 1 Branch Chief)

Staff Having the Right Skills for their Positions (n=16, c=17)
For management, we had the wrong people in the wrong places. We should find the right people and put them in the key positions. (n=16 is comprised of 3 Exec Staff, 5 Division Chiefs, 4 ADCs, and 4 Branch Chiefs)

Experience of the Field Staff (n=10, c=10)
Many of the regional directors had experience in one to five previous decennial censuses. Many of the temporary and new hires did not have previous field experience. (n=10 is comprised of 3 Exec Staff, 3 Division Chiefs, 3 ADCs, and 1 Branch Chief)

4.2 Hiring Processes (N=36, C=111) (N=36 is comprised of 6 Exec Staff, 8 Division Chiefs, 14 ADCs, and 8 Branch Chiefs)

Hiring Late in the Process (n=15, c=20)
Hiring occurred late in the process. Hiring should be done earlier in the process. The hiring of significant numbers of people did not start until 1998 and 1999. (n=15 is comprised of 1 Exec Staff, 1 Division Chief, 8 ADCs, and 5 Branch Chiefs)

Retention Processes (n=14, c=19)
We are trying to keep headquarters people. In 2003, we have to be creative in order to maintain staff. After the census, turnover is high. Staff retention will reduce risks. (n=14 is comprised of 2 Exec Staff, 4 Division Chiefs, 5 ADCs, and 3 Branch Chiefs)

Recruitment to the decennial census (N=13, C=19) (n=13 is comprised of 1 Exec Staff, 4 Division Chiefs, 4 ADCs, and 4 Branch Chiefs)

Recruitment to the DMD (n=9, c=12)
Taking a position with the decennial census risks an employee's divisional career development, which prevents people from volunteering for the decennial.

March 1999 Job Fair (n=4, c=4)
In March 1999, Census held a job fair and many new people were brought on.

Recruitment of Mathematical/Statisticians (n=3, c=3)
Aside from Math/Stats, there is little targeted recruiting.

Downsizing from the 1990 census (n=11, c=14)
After the 1990 census the organization scaled back, and very few people remained. Experienced staff retired or took buyouts. The downsizing was done

poorly. (n=11 is comprised of 1 Exec Staff, 1 Division Chief, 5 ADCS, 4 Branch Chiefs)

Successes in Field Hiring (n=10, c=17)
We should keep the front loading practice and competitive wage rates for field. (n=10 is comprised of 4 Exec Staff, 3 Division Chiefs, 2 ADCS, 1 Branch Chief)

Use of Temporary Hires (n=10, c=12)
The temporary status of staff caused many problems. (n=10 is comprised of 4 Division Chiefs, 3 ADCS, 3 Branch Chiefs)

Knowledge Sharing (n=7, c=10)
We lost too much institutional knowledge during the downsizing. We should keep staff on to create plans for 2010 Census so we do not lose that information. (n=7 is comprised of 1 Exec Staff, 1 Division Chief, and 5 ADCs)

Timing of Hiring for Census 1990 (n=2, c=3)
For Census 1990 the timing was different. Staff were in place between 1984 and 1989, in time for the tests and dress rehearsal (1988). Junior staff got experience and developed team spirit, and continuity was maintained. (n=2 is comprised of 2 ADCs)

4.3 Career Development (N=26, C=69) (N=26 is comprised of 7 Exec Staff, 6 Division Chiefs, 6 ADCs, and 7 Branch Chiefs)

Succession Planning (n=17, c=30)
Succession planning is better in regional offices than at headquarters because upcoming managers are trained on other censuses and surveys during non-decennial years. We need to grow leaders and managers earlier in the process. Management needs to put more of a structure in place to replace all the people retiring over the next few years. (n=17 is comprised of 4 Exec Staff, 5 Division Chiefs, 5 ADCs, and 3 Branch Chiefs)

Training (n=15, c=26)
There was little access to training prior to Census 2000. More training and rotation programs should exist. (n=15 is comprised of 3 Exec Staff, 3 Division Chiefs, 3 ADCs, and 6 Branch Chiefs)

Value of Program Management Skills (n=7, c=15)
More people are needed with program management skills. The Census Bureau should embrace program management skills. (n=7 is comprised of 2 Exec Staff, 2 Division Chiefs, and 3 Branch Chiefs)

4.4 Right Number of Staff (n=25, c=32)
I never had the number of staff that I needed. People were stretched too thin. (n=25 is comprised of 4 Exec Staff, 7 Division Chiefs, 7 ADCs, and 7 Branch Chiefs)

5.0 Leadership

Leadership (N=44, C=169) includes comments about the impact of leadership changes on decennial census operations, leadership priorities, and how the leadership handled external oversight.

5.1 Clarity of Direction (N=33, C=65)

Clarity of direction includes comments about the problems from priority changes and little strategic direction. (N=33 is comprised of 7 Exec Staff, 6 Division Chiefs, 12 ADCs, and 8 Branch Chiefs)

Little clarity existed in the strategic direction (N=21, C=34) (N=21 is comprised of 5 Exec Staff, 5 Division Chiefs, 7 ADCs, and 4 Branch Chiefs)

Little Strategic Direction (n=11, c=17)
There was a general lack of control and little strategic direction. Leadership should set the priorities of the census. Inconsistencies existed in the messages from the leadership. (n=11 is comprised of 3 Exec Staff, 3 Division Chiefs, 3 ADCs, and 2 Branch Chiefs)

Too Many Priorities (n=7, c=7)
There were too many things going on at the same time. The Census Bureau needs to decide on the most critical priorities and focus on them. (n=7 is comprised of 1 Exec Staff, 1 Division Chief, 3 ADCs, and 2 Branch Chiefs)

The Executive Staff Did Not Know What Strategy to Use (n=6, c=6)
The Executive Staff "did not know what to fix, let alone how to fix it, and how to get the census done." The leadership did not know what strategy to use. (n=6 is comprised of 2 Exec Staff, 2 ADCs and 2 Branch Chiefs)

Priority Changes (N=15, C=25) (N=15 is comprised of 2 Exec Staff, 3 Division Chiefs, 7 ADCs, and 3 Branch Chiefs)

Priority Changes based on Changes in Census Bureau Leadership (n=9, c=11)
The shifting of the leadership and their priorities made things very unclear at the ADC level. Each new leader brought his or her own priorities. (n=9 is comprised of 2 Exec Staff, 1 Division Chief, 5 ADCs, and 1 Branch Chief)

Lack of Continuity (n=8, c=14)

Census 2000 suffered from a lack of continuity, constantly changing priorities, and having no concrete plan. (n=8 is comprised of 1 Exec Staff, 3 Division Chiefs, 2 ADCs, and 2 Branch Chiefs)

5.2 Cohesiveness of the Leadership Team (N=18, C=33)

Cohesiveness of the leadership team includes comments on the general cohesiveness of the managers and the disparity in the goals. (N=18 is comprised of 4 Exec Staff, 3 Division Chiefs, 7 ADCs, and 4 Branch Chiefs)

Leadership Problems (n=9, c=14)
In 1997 the Census 2000 management was "in shambles" and "problematic." The leadership up to that point did not share a vision or leadership goals. (n=9 is comprised of 3 Exec Staff, 2 Division Chiefs, 3 ADCs, and 1 Branch Chief)

Hands-On Leadership (n=6, c=9)
The environment changed when Jay Waite came on board and he took a much stronger control of the processes. (n=6 is comprised of 1 Exec Staff, 1 Division Chief, 1 ADC, and 3 Branch Chiefs)

Strength of Senior Management (n=5, c=5)
Ken Prewitt had a lot of charisma and was a superb manager. John Thompson and Jay Waite are both strong managers. (n=5 is comprised of 1 Exec Staff, 2 Division Chiefs, and 2 ADCs)

A Strong Leadership Team is needed Throughout the Decade (n=4, c=5)
Leadership is needed throughout the decade and the management staff was brought on too late for Census 2000. (n=4 is comprised of 2 Exec Staff, 1 Division Chief, and 1 ADC)

5.3 Leadership Changes (n=18, c=30)

During the 1990s the Census Bureau leadership changed many times. (n=18 is comprised of 6 Exec Staff, 6 Division Chiefs, 4 ADCs, and 2 Branch Chiefs)

5.4 Relationship of Leaders with External Stakeholders (N=14, C=25)

(N=14 is comprised of 4 Exec Staff, 5 Division Chiefs, 4 ADCs, and 1 Branch Chief)

Positive Interaction with External Stakeholders (n=9, c=14)
The Executive Staff should have strong relationships with external stakeholders. Ken Prewitt facilitated a positive environment with Congress and the Department of Commerce. He provided strong communications. (n=9 is comprised of 4 Exec Staff, 3 Division Chiefs, and 2 ADCs)

Negative Interaction with External Stakeholders (n=6, c=11)

Communication and interactions with external stakeholders lacked consistency. The Executive Staff made promises early on that the Census Bureau could not keep. (n=6 is comprised of 1 Exec Staff, 2 Division Chiefs, 2 ADCs, and 1 Branch Chief)

6.0 How the Decennial Census Relates to Other Census Products (N=11, C=17)

The Decennial Census is a Core Product (n=5, c=8)
The decennial census is a core product of the Census Bureau. (n=5 is comprised of 2 Exec Staff, 2 Division Chiefs, and 1 ADC.

The Decennial Census is a Secondary Product (n=8, c=9)
The decennial census as it relates to other operations is considered to be "other duties as assigned." (n=8 is comprised of 1 Exec Staff, 3 Division Chiefs, and 4 ADCs.)

7.0 Organizational Structure

The organizational structure (N=41, C=118) includes comments about the impacts of the Field Division not reporting to the Decennial Census Directorate, the impacts to the decennial census from having a constantly changing organizational structure as well as how the lines of authority and reporting worked during Census 2000.

7.1 Executive Level Organizational Structure (N=33, C=87)

Executive level organizational structure includes comments on the challenges in the Field Division not reporting to the Decennial Census Directorate and the need to have better integration between the Regional Directors and DMD. (N=33 is comprised of 9 Exec Staff, 10 Division Chiefs, 11 ADCs, and 3 Branch Chiefs)

The Relationship Between Field and DMD (n=19, c=32)
There needs to be a closer integration between the DMD and Field. The relationship between the DMD and the Field Division needs to work better. (n=19 is comprised of 6 Exec Staff, 6 Division Chiefs, 4 ADCs, and 3 Branch Chiefs)

Reporting Lines (n=13, c=15)
Coordination between the PAD for Programs and the PAD for Administration was difficult. Confusion existed in the reporting lines. (n=13 is comprised of 3 Exec Staff, 4 Division Chiefs, 4 ADCs, and 2 Branch Chiefs)

Field Reporting to Non-Decennial Management (N=11, C=12) (n=11 is comprised of 4 Exec Staff, 2 Division Chiefs, 4 ADCs, and 1 Branch Chief)

Created Problems (n=7, c=7)

There was a challenge with the Field Division not reporting to the AD for Decennial. This caused many problems to be addressed late and there was a competition between decennial and field in places. Field should move under the PAD for programs. (n=7 is comprised of 2 Division Chiefs, 4 ADCs, and 1 Branch Chief)

Created a Positive Balance (n=4, c=4)
Having the Field Division under a different PAD than the Decennial Census Directorate provides an additional system of checks and balances. (n=4 is comprised of 4 Exec Staff)

The Role of the Field Division (n=6, c=6)
Field changes structure between planning and implementation. Field plays more of an administrative role. (n=6 is comprised of 2 Exec Staff, 1 Division Chief, and 3 ADCs)

Changes to the Management Approach (n=23, c=27)
The decennial census would have worked much better with a permanent organizational structure. The organizational structure did not work as well as intended. The organizational structure should be decided early on in the decade. (n=23 is comprised of 5 Exec Staff, 7 Division Chiefs, 7 ADCs, and 4 Branch Chiefs)

Management Approach Weaknesses (n=3, c=3)
The problems with implementation were based on structural issues. (n=3 is comprised of 1 Exec Staff and 2 Branch Chiefs)

Management Approach Strengths (n=2, c=2)
We should keep the current organizational structure in place. It worked admirably. (n=2 is comprised of 1 Exec Staff and 1 ADC)

7.2 Matrix Management Approach

The matrix approach (N=39, C=163) includes comments on why only one or two of the PSCs worked and the problems associated with the structure that caused the other PSCs to struggle, as well as how the PSC structure impacted decision-making processes.

Matrix Management Weaknesses (N=38, C=116)

The weaknesses of matrix management includes comments on the problems associated with the MIT, how the lack of integration led to little clarity and conflicting interests, and the negative impact the PSC structure had on Census 2000. (N=38 is comprised of 7 Exec Staff, 9 Division Chiefs, 15 ADCs, and 7 Branch Chiefs)

Problems associated with the MIT (N=20, C=44)

Problems with the MIT include comments on weaknesses with the MIT structure, little guidance from the MIT, level of MIT leadership, and awareness of the MIT. (N=20 is comprised of 1 Exec Staff, 6 Division Chiefs, 8 ADCs, and 5 Branch Chiefs)

Little Direction for Integration (n=10, c=20)
The "MIT never did its stated job of integrating the PSCs." Little integration existed in the PSC environment. (n=10 is comprised of 3 Division Chiefs, 3 ADCs, and 4 Branch Chiefs)

Coverage Gaps and Overlaps (n=7, c=7)
Some topics fell through the cracks and others were duplicated throughout the PSCs. (n=7 is comprised of 1 Exec Staff, 3 Division Chiefs, 2 ADCs, and 1 Branch Chief)

Little Communication between the PSCs (n=5, c=6)
"Communications across the PSCs was not good." Few formal mechanisms existed for PSCs to communicate with each other. (n=5 is comprised of 2 Division Chief, 2 ADCs, and 1 Branch Chiefs)

Little Guidance from the MIT (n=4, c=6)
There was little, if any, guidance from the MIT to the PSCs. (n=4 is comprised of 1 Exec Staff, 1 Division Chief, and 2 ADCs)

Some Managers were not Aware of the MIT (n=4, c=4)
I was not aware of or did not attend the MIT meetings. (n=4 is comprised of 1 Division Chief, 2 ADCs, and 1 Branch Chief)

Clarity of Roles (N=17, C=24)
There was little clarity in the PSC roles. Specifically, there was little clarity of authority, no one knew who was in charge, and the roles were unclear. (N=17 is comprised of 3 Exec Staff, 5 Division Chiefs, 7 ADCs, and 2 Branch Chiefs)

The Person Responsible for Specific Tasks was Unknown (n=9, c=10)
In the PSC (matrix) environment, the interfaces and people who were supposed to perform certain tasks were not known to members of other PSCs. (n=9 is comprised of 1 Exec Staff, 3 Division Chiefs, 4 ADCs, and 1 Branch Chief)

Lines of Authority and Responsibility were Unclear (n=7, c=9)
The matrix does not work well for reporting or accountability. The PSC chairs had no authority or line responsibility to make people do things. (n=7 is comprised of 2 Exec Staff, 1 Division Chief, 3 ADCs, and 1 Branch Chief)

The Roles were Unclear (n=5, c=5)

Even the people working on specific PSCs did not understand what the role of their particular PSC was. The roles were fairly amorphous. (n=5 is comprised of 2 Division Chiefs, 2 ADCs, and 1 Branch Chief)

The People on the PSCs did not possess the Right Skills (n=14, c=15)
The PSCs were not staffed with enough people or people with enough technical expertise. (n=14 is comprised of 3 Exec Staff, 3 Division Chiefs, 6 ADCs, and 2 Branch Chiefs)

Impact on Census 2000 (n=12, c=15)
The PSC experiment failed. I did not see the results from the PSCs. The PSCs destroyed our division because it took you out of the division and into the decennial. The PSCs were ineffective and detrimental to the goals of the census. (n=12 is comprised of 1 Exec Staff, 1 Division Chief, 7 ADCs, and 3 Branch Chiefs)

Leadership Not in Control of the Processes (n=8, c=8)
It was difficult to control the PSCs. The organization does not work well with matrix management. (n=8 is comprised of 3 Exec Staff, 4 ADCs, and 1 Branch Chief)

Budgets Unknown to PSCs (n=5, c=8)
The budgets were allocated via black box assumptions from the DMD to divisions and bypassed the PSCs. Many PSCs did not see their budgets. (n=5 is comprised of 2 Division Chiefs, 1 ADC, and 2 Branch Chiefs)

PSC Decision-making Processes (N=20, C=33)

PSC decision-making includes comments on the few decision-making processes and little authority granted to PSC chairs to make decisions. (N=20 is comprised of 2 Exec Staff, 5 Division Chiefs, 8 ADCs, and 5 Branch Chiefs)

Little Decision-Making (n=16, c=23)
There were few apparent processes for decision-making within the matrix structure. Few decisions were made in the PSCs. People did not want to take responsibility for making decisions. (n=16 is comprised of 2 Exec Staff, 4 Division Chiefs, 5 ADCs, and 5 Branch Chiefs)

Little Empowerment (n=5, c=6)
The PSCs were never empowered to do their jobs. The PSC chairs and their decisions were micro-managed by decennial management. (n=5 is comprised of 3 Division Chiefs and 2 ADCs)

PSCs Facilitated Decision-Making (n=2, c=3)

The PSC structure succeeded in raising issues, setting the agenda and resolving conflicts, due to steady memberships throughout and the ability to make decisions. (n=2 is comprised of 2 ADCs)

Matrix Management Strengths (N=9, C=14)

Matrix management strengths include comments on what worked well in some of the PSCs. (N=9 is comprised of 1 Exec Staff, 4 Division Chiefs, 2 ADCs, and 2 Branch Chiefs)

What Worked Well in the PSC Structure (n=5, c=6)
The matrix model worked well and good planning came out of our PSC. (n=5 is comprised of 3 Division Chiefs, 1 ADC, and 1 Branch Chief)

The Matrix Approach Enabled Interdivisional Understanding (n=3, c=4)
The matrix fostered interdivisional understanding and created a good system of checks and balances. (n=3 is comprised of 1 Exec Staff, 1 Division Chief, and 1 Branch Chief)

Elements of Success (n=2, c=4)
The matrix approach works well when the right people work on the appropriate PSCs. The DSSD PSC was set up well. (n=2 is comprised of 1 ADC and 1 Branch Chief)

7.3 Centralized Management Approach

The Centralized Management Approach (N=48, C=287) includes comments on how the Centralized Approach provided more clarity than the Matrix Approach, how the DMD's role was unclear and should be clarified for future decennials, and how the leadership empowered few lower level managers with the capability to make decisions.

Centralized Management Approach Strengths (N=17, C=23) (N=17 is comprised of 1 Exec Staff, 3 Division Chiefs, 10 ADCs, and 3 Branch Chiefs)

How the Centralized Model Worked (N=16, C=20) (N=16 is comprised of 1 Exec Staff, 3 Division Chiefs, 9 ADCs, and 3 Branch Chiefs)

The centralized model works well. (n=10, c=12)

The centralized model works best with a strong DMD. (n=7, c=8)

Accountability (n=2, c=3)

There was increased clarity by which divisions were responsible for tasks. (n=2 is comprised of 1 ADC and 1 Branch Chief)

Centralized Management Approach Weaknesses (N=9, C=9)

The model was extremely hierarchical and there was little collaboration among the management team members (n=5, c=5). The DMD did not take control of the process (n=4, c=4) (N=9 is comprised of 1 Exec Staff, 2 Division Chiefs, 5 ADCs, and 1 Branch Chief)

Roles and Responsibilities (N=41, C=129)

Roles and responsibilities includes comments regarding the DMD's role and the little clarity of the roles and responsibilities. (N=41 is comprised of 4 Exec Staff, 11 Division Chiefs, 17 ADCs, and 9 Branch Chiefs)

The DMD's Role (N=38, C=112)

The DMD's role includes comments on the little clarity in their roles, how the census would run smoother if the DMD maintained a permanent infrastructure, and the perception that the DMD staff should perform the roles of program managers and integrators. (N=38 is comprised of 4 Exec Staff, 10 Division Chiefs, 16 ADCs, and 8 Branch Chiefs)

The DMD Personnel as Program Integrators (n=23, c=36)

The DMD should provide a role of coordination and integration. For future censuses the DMD should have a greater centralization of control. The DMD sometimes performed the coordination and integration role successfully and other times it was not as successful during Census 2000. (n=23 is comprised of 2 Exec Staff, 5 Division Chiefs, 11 ADCs, and 5 Branch Chiefs)

Unclear Roles (n=13, c=16)

The DMD's role was not clearly defined; it lacked the clarity that was present with the DPLD. Responsibilities were communicated in a piecemeal fashion and the roles were not clear up-front. (n=13 is comprised of 1 Exec Staff, 1 Division Chief, 8 ADCs, and 3 Branch Chiefs)

Little Definition of Roles (n=12, c=17)

Roles and responsibilities throughout the Census Bureau need better definition. The key requires defining them up-front. (n=12 is comprised of 2 Division Chiefs, 8 ADCs, and 2 Branch Chiefs)

History of the DMD (n=11, c=20)

The DMD's role was similar to that of the Decennial Planning Division (DPLD) and the Decennial Operational Division (DOD). The DPLD approach of running the census first occurred during Census 1990. The

DMD's role changed throughout the 1990s. (n=11 is comprised of 1 Exec Staff, 2 Division Chiefs, 6 ADCs, and 2 Branch Chiefs)

Need for a Permanent Infrastructure (n=8, c=13)
The decennial should maintain a permanent infrastructure. This includes having a skeleton presence throughout the decade and establishing the DMD's role much earlier. (n=8 is comprised of 1 Exec Staff, 4 ADCs, and 3 Branch Chiefs)

The DMD Personnel as Program Managers (n=7, c=9)
The DMD personnel should serve in the program manager role. During Census 2000, this was perceived more as micro-management. (n=7 is comprised of 1 Exec Staff, 3 Division Chiefs, 1 ADC, and 2 Branch Chiefs)

The Roles and Responsibilities Document (n=5, c=9)
DMD wrote the Roles and Responsibilities document without much input from other divisions. Some people working on Census 2000 had not heard about the document. (n=5 is comprised of 2 Division Chiefs, 1 ADC, and 2 Branch Chiefs)

The DMD Personnel as Decision Makers (n=4, c=5)
The DMD should be decision-makers. (n=4 is comprised of 1 Division Chief, 1 ADC, and 2 Branch Chiefs)

Clear Roles (n=4, c=4)
By 1999 there was more clarity in the DMD's role. People knew what they were supposed to be doing. (n=4 is comprised of 3 Division Chiefs and 1 ADC)

The DMD's Control of the Decennial Budget (N=23, C=42) (N=23 is comprised of 4 Exec Staff, 7 Division Chiefs, 7 ADCs, and 5 Branch Chiefs)

DMD Control of the Budget (n=20, c=33)
Jay Waite enabled the DMD to control the funding for the decennial census when he came on in 1997 by making a case for the DMD's need to control the budget. The budget should remain in the DMD. (n=20 is comprised of 4 Exec Staff, 5 Division Chiefs, 7 ADCs, and 4 Branch Chiefs)

Budget Decisions (n=5, c=9)
With the DMD controlling the budget there were more layers required for review. Many of the divisions were unaware of the processes used to decide on the budget. (n=5 is comprised of 3 Division Chiefs, 1 ADC, and 1 Branch Chief)

7.4 Meeting Groups in the Centralized Management Approach (N=27, C=70)

Meeting groups refer to the comments regarding COM, OSAM, the IR/CC processes and the decennial divisions chiefs and how well these groups worked. (N=27 is comprised of 3 Exec Staff, 6 Division Chiefs, 9 ADCs, and 9 Branch Chiefs)

Operational Status and Assessment Meetings (OSAM) (N=16, C=27) (N=16 is comprised of 2 Exec Staff, 2 Division Chiefs, 5 ADCs, and 7 Branch Chiefs)

Communication Forum (n=10, c=13)
OSAM became a forum to discuss problems. (n=10 is comprised of 1 Exec Staff, 1 Division Chief, 4 ADCs, and 4 Branch Chiefs)
Meetings were Time Consuming (n=4, c=5)
The OSAM were painful because they were so time consuming. (n=4 is comprised of 1 Exec Staff and 3 Branch Chiefs)

Little Decision-making (n=4, c=4)
Few decisions were made during the OSAM. Tactical meetings occurred afterwards where the real decisions were made. (n=4 is comprised of 1 Division Chief and 3 Branch Chiefs)

Issues were Addressed Late in the Process (n=2, c=3)
Problems only surfaced when they became big problems. Few effective mechanisms existed to raise issues early. (n=2 is comprised of 1 ADC and 1 Branch Chief)

The DMD Informing Leadership on the Data (n=2, c=2)
The DMD did not have all the needed knowledge to effectively report on the programs. (n=2 is comprised of 1 ADC and 1 Branch Chief)

Census Operational Managers (COM) (N=16, C=21) (N=16 is comprised of 1 Exec Staff, 4 Division Chiefs, 7 ADCs, and 4 Branch Chiefs)

First Part of the Decision-Making Process (n=8, c=8)
In 1997 COM replaced the PSCs. It became the first part of the decision-making process and facilitated communications throughout the Census Bureau. (n=8 is comprised of 1 Exec Staff, 3 Division Chiefs, 3 ADCs, and 1 Branch Chief)

Meetings Stopped (n=7, c=7)
In 1999 COM meetings stopped. (n=7 is comprised of 2 Division Chiefs, 4 ADCs, and 1 Branch Chief)

Ineffectiveness (n=5, c=6)
COM was ineffective and some managers bypassed the entire process. (n=5 is comprised of 2 ADCs and 3 Branch Chiefs)

Issue Resolution/Change Control Process (IR/CC) (N=15, C=22) (N=15 is comprised of 5 Division Chiefs, 6 ADCs, and 4 Branch Chiefs)

Ineffective (n=8, c=8)
The IR/CC did not work because the people with the necessary knowledge were not at the meetings. (n=8 is comprised of 2 Division Chiefs, 4 ADCs, and 2 Branch Chiefs)

Decision Memo Series (n=6, c=7)
The IR/CC included a decision memo series. These memos provided a means to communicate decisions. The memos worked at first, but not as much later in the process. (n=6 is comprised of 2 Division Chiefs, 1 ADC, and 3 Branch Chiefs)

IR/CC as a Decision-Making Process (n=6, c=7)
The process created a forum to discuss and appeal decisions, which did not always work. (n=6 is comprised of 4 Division Chiefs and 2 ADCs)

Moving from the Matrix to the Centralized Approach (N=10, C=14) (N=10 is comprised of 5 Division Chiefs, 3 ADCs, and 2 Branch Chiefs)

The Transition was Difficult (n=6, c=7)
The approach change came late in the process, which made it difficult. (n=6 is comprised of 3 Division Chiefs, 2 ADCs, and 1 Branch Chief)

Difficulties for the DMD in Establishing Authority (n=4, c=5)
People involved with the PSC process resisted a strong DMD because people who did not lead PSCs now controlled the processes. (n=4 is comprised of 2 Division Chiefs, 1 ADC, and 1 Branch Chief)

Centralized Management was Needed to Make the Census Work (n=2, c=2)
We need a centralized management approach to effectively implement the decennial census. (n=2 is comprised of 1 Division Chief and 1 Branch Chief)

8.0 Decision-making Processes (N=35, C=98)

Impact of Timely Decisions Not being Made (N=21, C=41) (N=21 is comprised of 1 Exec Staff, 3 Division Chiefs, 11 ADCs, and 6 Branch Chiefs)

Timely decisions not being made caused the following problems:

Indecision (n=17, c=26)

The need for consensus made decisions difficult. Indecision led to schedule delays. Strategic decisions must be made early in the process. (n=17 is comprised of 1 Exec Staff, 1 Division Chiefs, 9 ADCs, and 6 Branch Chiefs)

Changes to Decisions (n=9, c=13)
Once decisions were made they were always open to be revisited. Final decisions did not exist. This caused additional work and delays. (n=9 is comprised of 3 Division Chiefs, 4 ADCs, and 2 Branch Chiefs)

Last Minute Planning (n=2, c=2)
Much was done at the last minute from indecision. (n=2 is comprised of 1 ADC and 1 Branch Chief)

Leadership's Control of Decision-making Processes (N=19, C=29) (N=19 is comprised of 1 Exec Staff, 4 Division Chiefs, 6 ADCs, and 8 Branch Chiefs)

Management's Involvement in Decision-making (n=15, c=17)
Jay Waite made most decisions. He felt that he had to be involved with everything. (n=15 is comprised of 4 Division Chiefs, 4 ADCs, and 7 Branch Chiefs)

Little Empowerment (n=6, c=12)
The Executive Staff wanted all decisions to go through them. Jay Waite did not empower his staff to make decisions. (n=6 is comprised of 1 Exec Staff, 1 Division Chief, 3 ADCs, and 1 Branch Chief)

Lack of Involvement of the Necessary People (n=11, c=19)

Decision-making did not involve the right people. (n=11 is comprised of 3 Division Chiefs, 5 ADCs, and 3 Branch Chiefs)

Few Processes Existed (n=9, c=9)

Few formal processes existed for decision-making. The DMD needs a better process. (n=9 is comprised of 1 Exec Staff, 2 Division Chiefs, 3 ADCs, and 3 Branch Chiefs)

9.0 Census Planning

Census planning (N=47, C=207) includes comments on the lack of planning and involvement of the right people in the planning processes, the lack of written guidance completed before the census, how the 1999 Supreme Court decision impacted the planning processes, and the current planning for 2010 Census .

Planning Strengths (n=5, c=6)

Overall the planning was fair and successful where groups took the time to plan ahead. (n=5 is comprised of 2 Exec Staff and 3 Division Chiefs)

Planning Weaknesses (N=34, C=87)

Planning weaknesses include comments on the need for the Regions to have a larger involvement in the planning processes, the impacts of starting the planning late, and the need for strategic planning. (N=34 is comprised of 8 Exec Staff, 9 Division Chiefs, 11 ADCs, and 6 Branch Chiefs)

Planning Should Start Earlier (N=27, C=49) (N=27 is comprised of 5 Exec Staff, 7 Division Chiefs, 10 ADCs, and 5 Branch Chiefs)

Impact of Late Planning (n=14, c=16)
Late planning caused problems to many activities during the execution phase. (n=14 is comprised of 3 Exec Staff, 3 Division Chiefs, 5 ADCs, and 3 Branch Chiefs)
Recommendations for Future Planning (n=11, c=13)
The key to success with the census begins with early planning. (n=11 is comprised of 3 Exec Staff, 3 Division Chiefs, 3 ADCs, and 2 Branch Chiefs)

Timing of Census 2000 Planning (n=9, c=11)
Late planning caused many of the problems with Census 2000. (n=9 is comprised of 2 Division Chiefs, 5 ADCs, and 2 Branch Chiefs)

Little Planning (n=7, c=9)
Little planning existed for Census 2000. (n=7 is comprised of 3 Exec Staff, 3 Division Chiefs, and 1 ADC)

Field's Involvement in Planning (n=17, c=35)
The Regional Directors should be more involved with the planning processes. Headquarters needs to keep them involved in the processes. This will help to ensure that both field operations and headquarters make similar plans. (n=17 is comprised of 6 Exec Staff, 4 Division Chiefs, 4 ADCs, and 3 Branch Chiefs)

Planning At the Strategic Level (n=3, c=3)
Planning needs to be addressed at a strategic level. (n=3 is comprised of 1 ADC and 2 Branch Chiefs)

9.1 Written Guidance (N=24, C=44)

Written Guidance includes comments on how many of the plans were written after Census 2000 and the lack of risk planning that occurred to mitigate potential mistakes. (N=24 is comprised of 5 Exec Staff, 7 Division Chiefs, 6 ADCs, and 6 Branch Chiefs)

Contingency planning (N=21, C=35) (N=21 is comprised of 4 Exec Staff, 7 Division Chiefs, 5 ADCs, and 5 Branch Chiefs)

Little Documentation of Processes (n=8, c=13)

There was little documentation of processes and we should have had documentation throughout the process. We did not have good records of prior planning. (n=8 is comprised of 2 Exec Staff, 3 Division Chiefs, 2 ADCs, and 1 Branch Chief)

Little Completed (n=9, c=11)
Risk planning would have mitigated many mistakes. There was no contingency plan (exit strategy) that enabled the Census Bureau to turn around at a certain point and use the traditional decennial census process. (n=9 is comprised of 3 Exec Staff, 5 Division Chiefs, and 1 ADC)

Strategic Level (n=7, c=11)
Contingency planning should occur at a strategic level by leadership. (n=7 is comprised of 1 Exec Staff, 1 Division Chief, 3 ADCs, and 2 Branch Chiefs)

Census 2000 Risks (n=6, c=8)
The matrix approach and dual path planning put Census 2000 at risk. (n=6 is comprised of 1 Exec Staff, 2 Division Chiefs, 1 ADC, and 2 Branch Chiefs)

Risk Reductions (n=4, c=5)
Using contractor's practices, keeping people on staff between censuses, and having up-front dollars mitigates potential risks. (n=4 is comprised of 2 Division Chiefs, 1 ADC, and 1 Branch Chief)

Program Master Plans (N=21, C=28) (N=21 is comprised of 1 Exec Staff, 4 Division Chiefs, 9 ADCs, and 7 Branch Chiefs)

Plans Completed After Census (n=10, c=12)
The PMP's were primarily completed after the census. (n=10 is comprised of 2 Division Chiefs, 6 ADCs, and 2 Branch Chiefs)

1990 PMPs Completed Promptly (n=6, c=7)
For the 1990 census, we had completed requirements documentation. (n=6 is comprised of 1 Division Chief, 3 ADCs, and 2 Branch Chiefs)

Plans Completed Before Census (n=1, c=1)
Census 2000 Publicity Office (C2PO) completed their plan ahead of time and was one of the few divisions that actually used the plan successfully. (n=1 is comprised of 1 Division Chief)

No Baseline (n=7, c=7)
Operational plans did not exist before the census. Many are being written now and there was no documented baseline. (n=7 is comprised of 1 Exec Staff, 1 Division Chief, 1 ADC, and 4 Branch Chiefs)

Prior to Census 1990 (n=1, c=1)
Leading up to 1990 clear operational guidelines existed. (n=1 is comprised of 1 ADC)

9.2 Impact of the Supreme Court Decision on Planning (N=23, C=31) (N=23 is comprised of 4 Exec Staff, 5 Division Chiefs, 10 ADCs, and 4 Branch Chiefs)

Got Planning Off Track (n=10, c=11)
Census 2000 planning problems occurred in part because groups planned for sampling, rather than enumeration. The late decision caused planning to get off track. (n=10 is comprised of 3 Exec Staff, 3 Division Chiefs, 2 ADCs, and 2 Branch Chiefs)

Planning for Both Types of Censuses (n=9, c=10)
We really created plans for both the sampling and the traditional enumeration. A second plan was beyond comprehension since people struggled keeping up with one plan. (n=9 is comprised of 1 Exec Staff, 1 Division Chief, 5 ADCs, and 2 Branch Chiefs)

Unable to Easily Change from Sampling to Traditional Enumeration (n=7, c=9)
The sampling plans could not be changed to traditional enumeration plans easily. This caused many problems in moving to traditional enumeration. (n=7 is comprised of 1 Division Chief, 5 ADCs, and 1 Branch Chief)

9.3 2010 Census Planning (N=18, C=27) (N=18 is comprised of 7 Exec Staff, 4 Division Chiefs, 6 ADCs, and 1 Branch Chief)

Timing (n=10, c=11)
The planning stage for 2010 has started on good footing this year. We need a core infrastructure in place by 2003. (n=10 is comprised of 6 Exec Staff, 1 Division Chief, 2 ADCs, and 1 Branch Chief)

Current Planning Activities (n=6, c=8)
2010 Census planning activities are currently underway. (n=6 is comprised of 2 Exec Staff, 1 Division Chief, and 3 ADCs)

Potential of Repeating Census 2000 Problems (n=6, c=6)
We are about to repeat the problems of Census 2000 for 2010 Census with too many groups. (n=6 is comprised of 1 Exec Staff, 2 Division Chiefs, and 3 ADCs)

Do Not Change What Worked (n=2, c=2)
We need to recognize the things that worked during Census 2000 and not change them. (n=2 is comprised of 1 Exec Staff and 1 ADC)

10.0 Internal Environment of the Decennial Directorate

Internal environment of the Decennial Directorate (N=49, C=309) includes comments about the strengths and weaknesses of the culture within the Decennial Directorate, how field operations impacted the decennial environment, and the complexities created from the large volume of data processed during the decennial census.

Strengths (N=23, C=43)

Strengths include comments on the positive attitude of decennial census participants and the good interactions between the DMD and other participating divisions. (N=23 comprises 3 Exec Staff, 4 Division Chiefs, 8 ADCs, and 8 Branch Chiefs.)

Attitude (n=11, c=13)

The staff working on the decennial census displayed an esprit de corps. An attitude exists that the census cannot fail, and the dedicated workforce puts in its all to make things happen. (n=11 comprises 3 Exec Staff, 3 Division Chiefs, 2 ADCs, and 3 Branch Chiefs.)

Good Interactions with Other Divisions (N=16, C=30)

The DMD and the Executive Staff had positive interactions with other divisions participating in the decennial census and the field operations. (N=16 comprises 2 Exec Staff, 2 Division Chiefs, 6 ADCs, and 6 Branch Chiefs.)

Good Relationship with the Field (n=10, c=15)

The regional offices received good support from headquarters. The field involvement with headquarters increased throughout the 1990s. (n=10 comprises 2 Exec Staff, 2 Division Chiefs, 5 ADCs, and 1 Branch Chief.)

Good Support from Decennial Leadership and the DMD (n=8, c=11)

Within the Decennial Directorate, there was high-level support. The DMD gave the divisions the proper amount of autonomy to complete their respective jobs. (n=8 comprises 1 Exec Staff, 1 Division Chief, 2 ADCs, and 4 Branch Chiefs.)

The Divisions Worked Well Together (n=4, c=4)

The divisions worked well together. (n=4 comprises 2 ADCs and 2 Branch Chiefs.)

Weaknesses (N=34, C=96)

During the decennial census, both trust and personality issues existed among the decennial census participants in the Census Bureau divisions. Interviewees perceived that the DMD had poor relationships with DSCMO and a sometimes-adversarial

relationship with the field division. (N=34 comprises 8 Exec Staff, 10 Division Chiefs, 11 ADCs, and 5 Branch Chiefs.)

View of the Decennial (n=12, c=24)
Interviewees perceived that the mission of the decennial census differs from that of other divisions. Some of the Census Bureau divisions resent the decennial census for taking their best people and "dumping them." The Census 2000 participating divisions felt that the DMD was constantly asking for information, but did not provide value-added services in return. (n=12 comprises 4 Exec Staff, 3 Division Chiefs, 3 ADCs, and 2 Branch Chiefs.)

Level of Trust (n=8, c=12)
The decennial leadership did not appear to trust the census staff. Some managers feared making decisions because they might lose their jobs. Many problems that were brought to management could have been resolved at a lower level if more trust existed in the organization. (n=8 comprises 1 Exec Staff, 2 Division Chiefs, 4 ADCs, and 1 Branch Chief.)

Personality Issues (n=8, c=8)
"There was a cultural disconnect between the programmers and the statisticians." "Everything is based on personal relationships." (n=8 comprises 1 Exec Staff, 2 Division Chiefs, 3 ADCs, and 2 Branch Chiefs.)

Poor Interactions with Other Divisions (N=25, C=45) (N=25 comprises 5 Exec Staff, 8 Division Chiefs, 7 ADCs, and 5 Branch Chiefs.)

Poor Relationship with the Field (n=12, c=23)
A good relationship between the people in field operations and the people at headquarters did not exist. The DMD did not account for timing and implementation procedures in the field when creating Census 2000 plans. This caused additional work for the regional offices. A closer integration between the field and the Decennial Directorate needs to exist. (n=12 comprises 4 Exec Staff, 5 Division Chiefs, 2 ADCs, and 1 Branch Chief.)

Poor Relationship with DSCMO (n=8, c=11)
DSCMO and the DMD had conflicting and contesting agendas. The two organizations did not form good partnerships, which resulted in numerous turf battles. (n=8 comprises 3 Division Chiefs, 2 ADCs, and 3 Branch Chiefs.)

An Adversarial Environment Existed (n=9, c=9)

Turf battles existed within the Decennial Directorate. Coordination between divisions turned into a "tug-of-war." (n=9 comprises 1 Exec Staff, 3 Division Chiefs, 2 ADCs, and 3 Branch Chiefs.)

Demographic and Housing Divisions (n=1, c=2)
The demographic and housing areas were difficult to work with because they did not have a group designated to the decennial census. They should have more integration with the decennial census.

10.1 The View of the Field and Operations Divisions (n=6, c=7)
Field is viewed as being at the "bottom of the food chain." "Finance, Budget, and Acquisitions are the lowest-ranking division chiefs." (n=6 comprises 2 Exec Staff, 2 Division Chiefs, and 2 ADCs.)

Field's Role in the Decennial Census (N=25, C=68) (N=25 comprises 5 Exec Staff, 8 Division Chiefs, 6 ADCs, and 6 Branch Chiefs.)

Regional Directors with SES Status (N=13, C= 22) (N=13 comprises 3 Exec Staff, 4 Division Chiefs, 4 ADCs, and 2 Branch Chiefs.)

Regional Directors with SES Status Was Difficult for Headquarters (n=7, c=12)
The SES status of the Regional Directors made the field ADCs at headquarters subordinate to the Regional Directors. The Field Division could not control the Regional Directors. The Regional Directors would bypass the Field Division and go straight to the Executive Staff to resolve problems. (n=7 comprises 1 Exec Staff, 2 Division Chiefs, and 4 ADCs.)

Regional Directors Deserve SES Status (n=6, c=9)
The Regional Directors deserved SES status because of the number of issues they dealt with. The SES status persuaded the Regional Directors to take a more active role in decision-making activities at headquarters. (n=6 comprises 2 Exec Staff, 2 Division Chiefs, 1 ADC, and 1 Branch Chief.)

Field Budget (n=11, c=26)
The bulk of the decennial census dollars goes into the field operations. During the off years, the field is funded through other surveys. It was difficult getting money from the DMD, and the Field Division had to argue for funds. (n=11 comprises 2 Exec Staff, 4 Division Chiefs, 3 ADCs, and 2 Branch Chiefs.)

Role of Field in Completing the Census (n=10, c=12)

The decennial census cannot happen without the people in the field. The field operations perform the collections function of the census. The Regional Directors were responsible to "get the job done." (n=10 comprises 3 Exec Staff, 3 Division Chiefs, 3 ADCs, and 1 Branch Chief.)

Decennial Census in Relation to Other Surveys (n=6, c=8)
The decennial census is similar to other surveys the field performs. (n=6 comprises 1 Exec Staff, 2 Division Chiefs, 2 ADCs, and 1 Branch Chief.)

10.2 Reporting Lines (n=13, c=15)
There are multiple levels of reporting throughout the decennial census. The leadership from the Decennial Directorate appear to believe that staff in other directorates report to them. (n=13 comprises 4 Exec Staff, 5 Division Chiefs, and 4 ADCs.)

Added Complexities from the Size of the Decennial Census (n=9, c=14)
The people working on the decennial need to understand the magnitude of the census. Much of the complexity created by the decennial census is based on its volume. (n=9 comprises 2 Division Chiefs, 4 ADCs, and 3 Branch Chiefs.)

10.3 Testing (N=28, C=74)
Testing reports on the dress rehearsal, activities that were not tested, and general testing goals for 2004. (N=28 comprises 7 Exec Staff, 7 Division Chiefs, 10 ADCs, and 4 Branch Chiefs.)

Dress Rehearsal (N=18, C=23)
Comments on the dress rehearsal focus on the need for more time between the dress rehearsal and the actual census, the need for better plans, and the problems associated with running a dual-path dress rehearsal. (N=18 comprises 3 Exec Staff, 3 Division Chiefs, 10 ADCs, and 2 Branch Chiefs.)

Not Enough Time to the Census (n=8, c=9)
"It is too late to have a dress rehearsal in year eight. If the dress rehearsal is late, there is no opportunity to implement new processes. The dress rehearsal needs to be earlier." (n=8 comprises 1 Exec Staff, 2 Division Chiefs, 4 ADCs, and 1 Branch Chief.)

Need for Concrete Plans (n=6, c=6)
"Production requirements need to be completed by the dress rehearsal." "We need to have the same procedures in place for the dress rehearsal as for the census." (n=6 comprises 2 Exec Staff, 3 ADCs, and 1 Branch Chief.)

Dual-Path Dress Rehearsal (n=3, c=4)

"The dress rehearsal was conducted using a dual path of sampling and traditional enumeration." "If the sampling process had gone forward, the dress rehearsal would have been fine." (n=3 comprises 2 ADCs and 1 Branch Chief.)

Untested Activities (N=15, C=31) (N=15 comprises 5 Exec Staff, 3 Division Chiefs, 5 ADCs, and 2 Branch Chiefs.)

Many Activities Were Untested (n=11, c=14)
"Every major new idea that was implemented was not tested, but it did seem to work." "Testing was done on the fly during implementation." "The tests and the dress rehearsal were not the methodology used in the decennial census." (n=11 comprises 2 Exec Staff, 3 Division Chiefs, 4 ADCs, and 2 Branch Chiefs.)

Better Testing of Technology is Needed (n=9, c=13)
"We need to test the systems from top to bottom by the start of the decennial census." "We were still testing technology in 1999." The lack of testing for the telephone questionnaire assistance caused problems during the actual census. (n=9 comprises 4 Exec Staff, 2 Division Chiefs, and 3 ADCs.)

Untested Form (n=2, c=4)
"During Census 2000, we used an untested form. We also did not test requests for forms in different languages." (n=2 comprises 1 ADC, and 1 Branch Chief.)

Test Goals for 2004 (n=6, c=10)
The systems should be ready for testing in 2004. We should also have a targeted second mailing in place. "The decisions must be completed by year two, the field work of implementing procedures and tests should be done in year three, and the tests are performed in year four." (n=6 comprises 1 Exec Staff, 2 Division Chiefs, 2 ADCs, and 1 Branch Chief.)

Impact of Testing on the Strategic Development of the Census (n=5, c=7)
Testing shows us our capabilities. "Testing, strategic, and planning decisions need to be made 2 years to 3 years prior to the test. The decisions need to remain constant and not be changed." (n=5 comprises 1 Exec Staff, 1 Division Chief, 2 ADCs, and 1 Branch Chief.)

Need for Divisional Involvement in the Testing Processes (n=2, c=2)
Operational branches and management teams should be involved and work together during the testing phases. (n=2 comprises 1 Exec Staff and 1 ADC.)

Testing for the 1990 census (n=1, c=1)
"For the 1990 census, senior managers for the management structure were in place by 1984. Tests were run in 1985, 1986, and 1987, with a dress rehearsal in 1988 with the management team. By 1990, there was a lot of teaming and experience among the decennial census managers." (n=1 comprises 1 ADC.)

11.0 Communications (N=41, C=134)

Communications reports on the internal and external communications processes used during the decennial census.

Internal Communications (N=35, C=95) (N=35 comprises 6 Exec Staff, 11 Division Chiefs, 11 ADCs, and 7 Branch Chiefs.)

Strengths of Internal Communications (N=14, C=18)
The DMD created an environment that facilitated discussions among participating divisions. Reporting was also a good means for communications. (N=14 comprises 3 Exec Staff, 4 Division Chiefs, 4 ADCs, and 3 Branch Chiefs.)

Facilitation of Discussions (n=11, c=13)
The DMD was good at allowing people to talk and facilitating discussions. Interdivisional meetings were facilitated. The weekly address list meeting facilitated discussions among the divisions working on the Master Address File (MAF). (n=11 comprises 2 Exec Staff, 2 Division Chiefs, 4 ADCs, and 3 Branch Chiefs.)

Reporting Processes (n=5, c=5)
Reports were used to communicate decisions. This worked well toward the beginning of the process, but "fell through the cracks as time wore on." (n=5 comprises 1 Exec Staff, 3 Division Chiefs, and 1 Branch Chief.)

Weaknesses of Internal Communications (N=30, C=77)
Little information sharing occurred among the participating divisions. Few strong channels of communications existed between the Executive Staff and the DMD. (N=30 comprises 4 Exec Staff, 11 Division Chiefs, 10 ADCs, and 5 Branch Chiefs.)

Little Information Sharing (n=22, c=37)

"Decisions were communicated on a need-to-know basis." The DMD generally would not include other divisions on the distribution list when sending out memos and reports. Other divisions also did not have many opportunities to provide inputs. "Information flow went upwards and sideways, and never came back down. It was one-way communication." Information for Census 2000 was tightly held. (n=22 comprises 4 Exec Staff, 8 Division Chiefs, 7 ADCs, and 3 Branch Chiefs.)

Poor Communications Existed Between the Executive Staff and the DMD (n=11, c=21)
"Information was often mischaracterized at the Executive Staff level because they were not involved in operations." "The midlevel managers struggled to communicate the program's technical difficulty to the executive leadership." The leadership (both Executive Staff and Decennial Directorate) did not always communicate well with the divisions. (n=11 comprises 1 Exec Staff, 6 Division Chiefs, 3 ADCs, and 1 Branch Chief.)

Lack of Clarity in Communications (n=6, c=15)
"Communications were confusing; Jay Waite would say one thing, but the DMD would have a different set of directions." "It was not very clear what was going on at any given time." Communications could be inconsistent below the Associate Director level. (n=6 comprises 1 Exec Staff, 1 Division Chiefs, and 4 ADCs.)

Little Change Management (n=4, c=4)
Change was not always welcome in the process. Better processes should be used to effect change. (n=4 comprises 2 Division Chiefs, 1 ADC, and 1 Branch Chief.)

External Communications (N=15, C=31)
Much of the communications to external stakeholders were performed by individual divisions, which led the overall communications to lack a consistent message. (N=15 comprises 4 Exec Staff, 2 Division Chiefs, 6 ADCs, and 3 Branch Chiefs.)

Increase DMD Communications (n=8, c=12)
Toward the beginning of the decade, many production people within the participating divisions spent a substantial amount of time responding to external inquiries. Toward the end of the decade, there were groups set up in many divisions to handle communications requests. (n=8 comprises 2 Exec Staff, 2 Division Chiefs, 2 ADCs, and 2 Branch Chiefs.)

Communications Lacked a Consistent Message (n=7, c=9)

"The Census Bureau needs to have one communications voice. We need to find out what the operational branches are doing and then position the communications strategy to set one vision." "We need to have continuity of oversight groups by the same people." (n=7 comprises 2 Exec Staff, 3 ADCs, and 2 Branch Chiefs.)

Divisions Taking on Communications Responsibilities (n=6, c=10)
Responding to oversight groups took up substantial time from staff working in the participating divisions. Giving information to external groups took time away from program operations. (n=6 comprises 3 Exec Staff, 2 ADCs, and 1 Branch Chief.)

Centralization of Knowledge (n=6, c=9)
"There is no centralized repository for any documentation. Many things are not written and thus forgotten." (n=6 comprises 4 Division Chiefs, 1 ADC, and 1 Branch Chief.)

12.0 MIS Processes

MIS Processes (N=40, C=138) report on the Master Activity Schedule (MAS), the Census 2000 Cost Model, the Cost and Progress System (C&P System), and some of the problems that occurred from a lack of integration among the systems.

Master Activity Schedule (MAS) (N=30, C=80)
While the MAS did facilitate the understanding of dependencies among the participating divisions, the system was difficult to update and led to misunderstandings regarding activity completion dates. (N=30 comprises 2 Exec Staff, 7 Division Chiefs, 13 ADCs, and 8 Branch Chiefs.)

Upkeep of the MAS (N=18, C=34) (N=18 comprises 1 Exec Staff, 4 Division Chiefs, 10 ADCs, and 3 Branch Chiefs.)

Volume of Activities Created Problems (n=10, c=11)
There was too much detail in the MAS. The detail created problems in keeping the system up to date and in understanding the overall system. (n=10 comprises 2 Division Chiefs, 6 ADCs, and 2 Branch Chiefs.)

Lockups (n=9, c=11)
The lockups were a waste of time and a painful exercise. The process wore people out and resulted in a product that not everyone agreed with. The lockups did help to increase understandings of dependencies among the participating divisions. (n=9 comprises 1 Exec Staff, 2 Division Chiefs, 5 ADCs, and 1 Branch Chief.)

MAS Was Not User-Friendly (n=8, c=12)
The "MAS was cumbersome and took too much time to maintain." The system was not user-friendly. (n=8 comprises 1 Division Chief, 5 ADCs, and 2 Branch Chiefs.)

Inflexibility of Dates (n=10, c=13)
The MAS was used as an external document, but internally the dates had to be met. Planned dates in the MAS turned into actual dates. The system became outdated toward the end. (n=10 comprises 3 Division Chiefs, 3 ADCs, and 4 Branch Chiefs.)

The MAS Was an Effective Management Tool (N=14, C=24)

Facilitated Understanding of Dependencies (n=9, c=13)
The MAS "forced both the technical (operational) and program planning groups to discuss their activities and map out their interrelations." The process forced everyone to understand what others were doing and how things fit together. (n=9 comprises 2 Exec Staff, 1 Division Chief, 3 ADCs, and 3 Branch Chiefs.)

Useful Tool (n=8, c=12)
The MAS was used as a roadmap for coordinators and managers. It was a valuable tool. It was a good learning tool and helped everyone to understand the census. (n=8 comprises 1 Division Chief, 4 ADCs, and 3 Branch Chiefs.)

Timing of MAS Completion (n=7, c=7)
The baseline for the MAS should be completed by year four. (n=7 comprises 1 Division Chief, 3 ADCs, and 3 Branch Chiefs.)

The Cost and Progress System (C&P System) (N=7, C=8)
The C&P System did not give accurate information. It was not a useful tool for the participating divisions, only the DMD. (n=7 comprises 2 Exec Staff, 1 Division Chief, 2 ADCs, and 2 Branch Chiefs.)

The C&P System Lacked Accuracy (n=4, c=4)
"The C&P System numbers were not right." The information was from different systems, and it never really came together properly. The C&P System and the MAS were not integrated. (n=4 comprises 1 Exec Staff, 1 Division Chief, 1 ADC, and 1 Branch Chief.)

Effectiveness of the C&P System (n=4, c=4)
The C&P System was only useful for the DMD. The system was not used by all of the participating divisions. (n=4 comprises 1 Exec Staff, 1 Division Chief, 1 ADC, and 1 Branch Chief.)

The Census 2000 Cost Model (N=16, C=25)
The Field Division had a cost model different from the one used in the DMD. The cost model was used more for external than internal purposes. Many of the model's assumptions were not documented. (N=16 comprises 2 Exec Staff, 6 Division Chiefs, 5 ADCs, and 3 Branch Chiefs.)

Effectiveness of the Cost Model (n=8, c=8)
The effectiveness of the cost model would be improved if it allowed for "what if" analyses and had flexible reporting options. The model produced information for the first time in decennial history on the budget. (n=8 comprises 1 Exec Staff, 3 Division Chiefs, 3 ADCs, and 1 Branch Chief.)

The Model Lacked Accuracy (n=7, c=9)
The assumptions used to create the cost model were not realistic. The model was used as an external showpiece for Congress as a means to justify the cost of the decennial census. (n=7 comprises 2 Division Chiefs, 2 ADCs, and 3 Branch Chiefs.)

The Model Was Accurate (n=5, c=6)
The DMD developed assumptions for each of the components within the cost model. Booz Allen Hamilton verified and validated the data. (n=5 comprises 1 Exec Staff, 1 Division Chief, 2 ADCs, and 1 Branch Chief.)

The Model Had Little Flexibility (n=2, c=2)
"We had to jump through hoops to get changes made to the cost model." (n=2 comprises 2 Division Chiefs.)

13.0 Contracting

Contracting Strengths (N=13, C=24)
Contracting strengths focuses on how contractors helped to improve the overall decennial processes and helped to decrease certain risks for the census. (N=13 comprises 1 Exec Staff, 5 Division Chiefs, 3 ADCs, and 4 Branch Chiefs.)

Contractors Helped to Improve Processes (n=9, c=12)

Contractors helped to instill discipline into the census process and to the Census Bureau. The contracts forced us to make decisions. (n=9 comprises 1 Exec Staff, 4 Division Chiefs, 1 ADCs, and 3 Branch Chiefs.)

Decreased Risk to Census 2000 (n=3, c=3)
Contractors mitigated some of our risks by helping us to assess risks and provide information to assess the changes and the consequences. (n=3 comprises 2 Division Chiefs and 1 ADC.)

Worked Well to Learn Contracting Processes (n=2, c=5)
We worked with the IG and GAO to learn good contracting practices. Contracting had leadership support, so we had the necessary resources. (n=2 comprises 1 Division Chief and 1 ADC.)

Contractors Got the Job Done (n=2, c=5)
It was easier to manage the contractors than it is to manage ourselves. Lockheed Martin and TRW were able to deal with issues that the culture at the Census Bureau could not. (n=2 comprises 1 Division Chief and 1 Branch Chief.)

Contracting Weaknesses (N=18, C=47)
Contracting weaknesses include comments on the impact of contracting out internal software development functions, about the problems that occurred because the Census Bureau did not know much about contracting, that contracts had few evaluation criteria, and that the contracts should have been started earlier in the decade. (N=18 comprises 3 Exec Staff, 6 Division Chiefs, 5 ADCs, and 4 Branch Chiefs.)

Impact of Contracting Internal Functions (n=9, c=11)
The internal programmers felt threatened from the decisions to contract out large processing functions. (n=9 comprises 1 Exec Staff, 3 Division Chiefs, 3 ADCs, and 2 Branch Chiefs.)

Little Known About Contracting (n=6, c=14)
The divisions responsible for the jobs that were contracted out need to be more involved in negotiating future contracts. We need a model for working with contractors. "The decennial did not make a commitment to creating an expertise and to developing skill sets to manage contracts." More experience is necessary in managing contracts. (n=6 comprises 1 Exec Staff, 3 Division Chiefs, 1 ADC, and 1 Branch Chief.)

Contractor Problems (n=4, c=5)
There were difficulties from mismanaged expectations between the Census Bureau and contractors. Specifically, Lockheed Martin called for a 2 percent error rate in the data capture, which was unacceptable for the decennial. In

addition, some contractors brought in foreign nationals who required escorts. (n=4 comprises 2 Division Chiefs, 1 ADC, and 1 Branch Chief.)

Contracts Should Have Started Earlier (n=4, c=4)
Contracts should be in place in time for testing and evaluation activities. (n=4 comprises 2 Exec Staff, 1 Division Chief, and 1 Branch Chief.)

Few Evaluation Criteria (n=3, c=8)
Evaluation criteria were still being developed during program execution. Quality control needs to be better for future decennial censuses. (n=3 comprises 2 Division Chiefs and 1 ADC.)

Inability to Transfer Technology to Other Census Bureau Programs (n=3, c=4)
There are problems with contractors not providing the Census Bureau with sufficient detail on the mechanics of the systems, which prevents the system from being used in other census programs, such as the Economic Census. (n=3 comprises 1 Exec Staff, 1 Division Chief, and 1 ADC.)

13.1 Requirements Definition (N=24, C=64)
Requirements Definition focuses on how well the decennial census requirements were defined. (N=24 comprises 3 Exec Staff, 5 Division Chiefs, 12 ADCs, and 4 Branch Chiefs.)

Strengths in Requirements Definition (N=5, C=8)
Requirements for technology were used for knowledge management and contained the right amount of detail. (N=5 comprises 1 Division Chief, 2 ADCs, and 2 Branch Chiefs.)

Requirements Were Used for Knowledge Management (n=4, c=6)
"We used the same documents and requirements from our main contractors (TRW and Lockheed Martin) to build out the centers and our site at Jeffersonville." "Documentation and identification of requirements is what takes us from each decade." (n=4 comprises 1 Division Chief, 1 ADC, and 2 Branch Chiefs.)

The Right Data Were Used (n=2, c=2)
"We are learning how to write good SOWs." Classes exist on how to develop good requirements and how to write good specifications. (n=2 comprises 1 ADC and 1 Branch Chief.)

Weaknesses in Requirements Definition (N=23, C=56)

Weaknesses in requirements definition specifically refers to the few requirements that were written and the problems caused by late requirements. (N=23 comprises 3 Exec Staff, 5 Division Chiefs, 11 ADCs, and 4 Branch Chiefs.)

Few Requirements Were Written (n=13, c=19)
Requirements that were not communicated well to contractors caused problems. Programs would be shipped without documenting the output. Many project shortcomings were due to the lack of requirements. "For a Request for Proposals (RFP), you need a good set of requirements." There was little requirements oversight. (n=13 comprises 1 Exec Staff, 4 Division Chiefs, 5 ADCs, and 3 Branch Chiefs.)

Requirements Were Not Completed in a Timely Manner (n=9, c=15)
"Software development needs to be improved. Need to have the requirements and system objectives early in the process." "Contract and system requirements were defined too late." Contracts were finalized before the requirements were defined. (n=9 comprises 2 Exec Staff, 1 Division Chief, 4 ADCs, and 2 Branch Chiefs.)

Few Processes Exist to Develop Requirements (n=9, c=11)
We need a drastic improvement in the process of developing requirements. There were few processes in place to manage requirements. "We need to make sure we consider the how as well as the what in dealing with the plans for implementation and operations." (n=9 comprises 1 Exec Staff, 2 Division Chiefs, 5 ADCs, and 1 Branch Chief.)

Requirements Were Written by People Without the Proper Technical Knowledge (n=5, c=7)
We need to have the right people involved for requirements development. "During the census, we had people writing requirements who did not have the proper technical knowledge." People from the National Oceanic and Atmospheric Administration (NOAA) were brought in to write census requirements. (n=5 comprises 1 Division Chief, 3 ADCs, and 1 Branch Chief.)

The Requirements Lacked Quality (n=5, c=5)
The need to get things done overrode the need to have quality data. We need to have better requirements in the future. (n=5 comprises 1 Division Chief and 4 ADCs.)

13.2 Change Control Processes (N=17, C=41)

Change control processes focus on the programmatic impact (both cost and schedule) of making changes and the few processes in place to manage programmatic changes. (N=17 comprises 4 Division Chiefs, 7 ADCs, and 6 Branch Chiefs.)

Documentation of Changes (N=11, C=17) (N=11 comprises 2 Division Chiefs, 5 ADCs, and 4 Branch Chiefs.)

Few Change Control Processes Existed (n=9, c=15)
"We did not have a good change control process for decennial management." "We need to have good documentation throughout the process." "We need a more rigorous change control process." (n=9 comprises 2 Division Chiefs, 5 ADCs, and 2 Branch Chiefs.)

Use of Baseline Schedule for Making Changes (n=2, c=2)
There was a decision used not to use a baseline. We should use a baseline approach to document changes. (n=2 comprises 2 Branch Chiefs.)

Little Strategic Change Control (n=9, c=10)
There were constant changes until the last minute. "There is a need for change management at the decennial census level—not just at the directorate, but across the board." "There was no change control in place; no one was looking at the big picture." "Change was out of control." (n=9 comprises 2 Division Chiefs, 4 ADCs, and 3 Branch Chiefs.)

Changes Increased Contract Costs (n=8, c=10)
Once a contract is signed, it is not easy to modify. We ended up with a cost-plus contract. Change orders cost a lot more than expected. "Contracting did not lose a lot of money, but changes in schedules and requirements did." (n=8 comprises 2 Division Chiefs, 4 ADCs, and 2 Branch Chiefs.)

Change Control Processes Used (n=3, c=4)
At headquarters, the programmers write up the changes. Sometimes the change control was less formal and was accomplished in the form of daily conference calls. The MAS was supposed to be the official source of changes, but that did not always occur. (n=3 comprises 1 Division Chief, 1 ADC, and 1 Branch Chief.)

13.3 Technology (N=15, C=24) (N=15 comprises 2 Exec Staff, 4 Division Chiefs, 6 ADCs, and 3 Branch Chiefs.)

A Better Strategy Is Needed for the Use of Technology (n=8, c=9)
It is difficult to know what technology should be used so many years before it is needed. We need a strategy for technology and technological changes. We need

better software development practices. (n=8 comprises 2 Exec Staff, 1 Division Chief, 4 ADCs, and 1 Branch Chief.)

In-House Technology (n=6, c=8)
"Most internal software development is a struggle." "Internally, we were not keeping up with the latest technology and capacity." (n=6 comprises 4 Division Chiefs and 2 Branch Chiefs.)

Technology Improved Census 2000 (n=3, c=3)
Technology has helped us to improve the decennial census. (n=3 comprises 3 ADCs.)

Issues with Automation (n=3, c=3)
Automation will cost more initially, but will save money in the end. It is difficult making the transition from manual to automated. (n=3 comprises 1 Exec Staff, 1 ADC, and 1 Branch Chief.)

Data Capture (n=13, c=24)
The first contracting of the Data-Capture System (DCS 2000) began in 1996 to Lockheed Martin. TRW created the operations for the three Data-Capture Centers (DCC). Data capture was up, and we believe that this is a function of outsourcing. (n=13 comprises 2 Exec Staff, 3 Division Chiefs, 3 ADCs, and 5 Branch Chiefs.)

Telephone Questionnaire Assistance (n=10, c=11)
We contracted with TRW for telephone questionnaire assistance (TQA). We did not have the TQA outsourcing in place for the dress rehearsal. This caused problems during the actual census. (n=10 comprises 1 Exec Staff, 2 Division Chiefs, 4 ADCs, and 3 Branch Chiefs.)

DSCMO's Roles and Responsibilities (n=4, c=7)
DSCMO was responsible for forming partnerships with the contractors. "DCSMO should manage all information technology (IT) contracts." (n=4 comprises 1 Division Chief, 2 ADCs, and 1 Branch Chief.)

First-Time Use of Contracting (n=3, c=3)
Census 2000 was the first time the Census Bureau used contracting for information technology. In all, 11 different contractors were used, including the subcontractors. (n=3 comprises 1 Exec Staff, 1 Division Chief, and 1 ADC.)

APPENDIX C: INTERVIEWEES FOR MANAGEMENT EVALUATION OF THE DECENNIAL CENSUS

Name	Role
EXECUTIVE STAFF	
Barron, Bill	Census Bureau Director (Acting); Assistant Director
Clark, Cynthia	AD Methodology and Standards
Collins, La Verne	AD Communications (Acting)
Potok, Nancy	CFO & PAD Admin.
Raines, Marvin	AD Field
Thompson, John	AD Decennial Census; PAD Programs
Van Horn, Carol	AAD Field; Chief DMD (1998-1999)
Waite, Jay	AD Decennial Census
DIVISION/OFFICE CHIEFS	
Angueira, Terry	Chief DMD
Hogan, Howard	Chief DSSD
Killion, RuthAnn	Chief PRED
Long, John	Chief POP
Longini, Michael	Chief DSCMO
Marks, Jennifer	Chief PIO/C2PO
Marx, Bob	Chief GEO
Miskura, Susan	Chief DMD, 1999–2000
Palensky, Michael	Chief Acquisitions
Petty, Judith	Chief NPC
Weinberg, Dan	Chief HHES
REGIONAL DIRECTORS	
Holmes, James	Regional Director, Atlanta
Lavin, Susan	Regional Director, Denver
ASSISTANT DIVISION CHIEFS	
Blass, Dick	FLD
Bolton, Debbie	PRED
Cummings, Janet	FLD
Dawson, Judy	TMO
Franz, Linda	GEO
Galdi, David	GEO

Gore, Ed	DMD
Kostanich, Donna	DSSD
Leithauser, Gail	FLD
Monaghan, Brian	FLD
Nash, Fay	DMD
Norry, Len	HHES
Perez, Miguel	DMD
Pike, Ed	DMD
Singh, Raj	DSSD
Stoudt, Dennis	DSCMO
Wagner, Ed	DSCMO
Weiler, Mike	Special Assistant to the Associate Director Field
Whitford, David	DSSD
BRANCH CHIEFS	
August, Brenda	FLD
Hovland, Idabelle	DMD
Ingold, Jane	DMD
Lichtman Panzer, Paulette	DMD
Lucas, Sandra	FLD
Matsko, Mark	NPC
Miller, Carol	DMD
Sobel, Joel	GEO
Tinari, Barbara	DMD
Treat, James	DSSD
Urrutia, Maria	DMD
Wessler, Tracy	DSCMO

APPENDIX D: LISTING OF ACRONYMS USED IN REPORT

ACRONYM	DEFINITION
ACE	Accuracy and Coverage Evaluation
AD	Associate Director
ADC	Assistant Division Chief
ADD	Assistant Director for Decennial Census
C&P	Cost and Progress (System)
C2PO	Census 2000 Publicity Office
CMB	Census Monitoring Board
COM	Census Operational Managers
DoC	U.S. Department of Commerce
DMD	Decennial Management Division
DPLD	Decennial Planning Division
DSCMO	Decennial Systems and Contracts Management Office
DSSD	Decennial Statistical Studies Division
FLD	Field Division
FTE	Full-Time Equivalent
GAO	General Accounting Office
GEO	Geography Division
HHES	Housing and Household Economic Statistics Division
IG	Inspector General
IR/CC	Issue Resolution/Change Control (Process)
MAS	Master Activity Schedule
MAF	Master Address File
MIT	Management Integration Team
NUD*IST	Non-numerical Unstructured Data Indexing, Searching, and Theorizing
OMB	Office of Management and Budget
OSAM	Operational Status and Assessment Meetings
PAD	Principal Associate Director
PL	Public Law
PMP	Program Master Plan
PSC	Program Steering Committee
POP	Population Division
PRED	Planning, Research, and Evaluation Division
PwC	PricewaterhouseCoopers LLP
QSR	Qualitative Solutions and Research
RIF	Reduction in Force
SES	Senior Executive Service
TIGER	Topologically Integrated Geographic Encoding and Referencing

U.S.C.	United States Code

APPENDIX E: INTERVIEW GUIDE

Name **Position:** **Interview Date:** **Time:**

We would like to discuss some of the questions from the following table:

INTERVIEW GUIDE	
DISCUSSION AREA	QUESTION POOL
Role and Responsibility	Describe your role in Census 2000 and how it fits into the chain of command.
	Have you been involved in previous census efforts? Briefly describe your role?
Management Model	Describe the model used for Census 2000. How is the decennial census management approach different during a census year than during other years?
	What were the strengths and weaknesses of the Program Steering Committees and the Management Integration Team approach (matrix)? The centralized approach (DMD managed across all programs)?
	How did the hierarchical structure of the participating Divisions mix with each of Census 2000 management models described above?
	What challenges did each of these models present to you in accomplishing your objectives?
	What were the priorities of Census 2000 [cost, quality (accuracy), customer service, timeliness]?
	How did the model used impact the overall management of the census? The conduct of the census? What alternatives might have worked better or could be used in the future?
Census Environment and External Influences	How was the decennial management environment different during this census from that during other censuses?
	What has been the driving force for change in the conduct of the census over the last 10 years?
	Did changes in the political environment affect the management structure and operations of Census 2000? If so, how?
	How has the management environment changed over the years? Leadership style? Rigor? Accountability? Size? Responsibilities? (internal, political, external, complexity, and volume changes)
	What constraints does the decennial census deal with that might not be prevalent in other federal agencies, private industry, or other similar organizations?
	What impact, if any, did oversight groups (Monitoring Board, GAO, IG, OMB, Congress) have on the management and conduct of the census? Discuss the relationship between Census Bureau and Dept of Commerce, OMB, the Administration, and Congress.
	Did the environment encourage a free flow of information (positive and negative) up and down the organization? Was there an open environment for professional debate on issues?
	How effective were the Census Bureau's strategies for dealing with external stakeholders?
	How effective was the communications strategy, both internal and external? How well did the Census Bureau make its case to external stakeholders?
Decision Making Processes	Describe your understanding of the management decision-making process(es) that was used for Census 2000. What were the strengths and weaknesses of the process(es)?
	Describe your understanding of the levels of authority required for decision making.
	Did decision makers gather relevant information before making decisions?
	Did decision makers encourage an open debate of difficult issues before making decisions?
	Were the decisions made during the conduct of Census 2000 consistent with stated leadership priorities?
	Were tactical decisions reached appropriately at lower levels? Was there a clear and communicated set of criteria by which to differentiate between appropriate levels at which decision making should be made? Were there specific criteria that were required to elevate a decision to leadership? What were they?

	How often were decisions elevated to higher levels of leadership? Was this appropriate, or should there have been more authority delegated to empower decision making at lower staff levels?
	Were all parties generally satisfied with the way decisions were arrived at?
	Describe your understanding of the issue resolution and change control process(es). What were the strengths and weaknesses of the process(es)? What changes would have made the process(es) more effective?
	How might you modify the issue resolution process to balance the need for quick decisions with the limited ability to get full information before making a decision?
	How were decisions communicated internally? Were these communications effective?
	What impact, if any, did the oversight or advisory groups (formal and informal) have on the decision-making process(es) used in Census 2000?
Organizational Structure and Processes	What was the DMD's stated versus actual role? What should DMD's role have been?
	What were the DMD program managers' stated versus actual roles?
	What was the objective of the OSAM meetings? What would have been a more effective approach to achieving these objectives?
	Did the executive leadership effectively communicate roles and responsibilities to the various participating divisions, components, and staffs working on the census?
	Is the organization entrenched in certain practices, or is it innovative and flexible?
	Are lines of authority clear, both in budget authority and guidance? Are activities within areas of responsibility clearly delineated? Do some staff members routinely take on activities that are not in their formal area of responsibility to maintain continuity and progress or to help other component staffs?
	Do units within the Census Bureau operate in a compartmentalized and autonomous manner?
	Are there single process owners for distinct census operations? intra/interdivisional teams?
	How does collaboration occur? In what forum or structure? Is there a mechanism for "end-runs" of senior managers to the executive leadership? Through other senior managers to build support? Are there mechanisms by which individuals can "end-run" others in positions of authority?
	Describe the management culture during Census 2000? Leadership style? Census Bureau's corporate personality?
	Were the participating divisions able to access information efficiently and effectively? Were the DMD program managers able to access the appropriate amount of information and support from participating divisions?
	Were the management information support systems (Cost Model, budget process, MAS, and C&P) and components (DMD administrative office) useful to you in carrying out activities in your area of responsibility?
	Were the decennial management structures and tools used successful in achieving the desired objective? (OSAM meetings, Census Operational Managers, Decennial Division Chiefs, cost model, cost and progress systems, MIS) Were the structures and tools effective in facilitating program integration across the different program elements?
	Were there activities in the areas of responsibility outside the Decennial Directorate that should have been more integrated? How effective were the organizational interfaces between the groups?
	How well did the Census Operational Managers (COM) work together? How is operational integration achieved in the non-decennial census organizational structure?
Executive Leadership	What constraints does the Census Bureau deal with that might not be prevalent in other federal agencies, private industry, or other similar organizations?
	What have been the greatest challenges to achieving your goals and objectives?
	What have you learned with 20/20 hindsight?
	How would you run Census 2000 differently? What did you learn from your experience? Which management approaches, organizational structures, or processes should stay the same for 2010 Census , and which might be different?

APPENDIX F: STUDY PLAN

CENSUS 2000 STUDY PLAN
Carol Miller (DMD)

Q1. Evaluation of the Management Processes and Systems of the 2000 Decennial Census

1. Background

Many complex and interrelated operations comprise a decennial census. The key to a successful census is to assure that the right things happen at the right time. Decisions about census operations are made using all available information. The census design needs to be guided by explicit objectives, policy decisions, and stakeholder input.

This evaluation, a comprehensive study to evaluate management of the Census 2000, will provide valuable information for planning future censuses and similar projects. It concentrates on evaluating management structures, processes and procedures within the Decennial Census Directorate, but also requires some investigation into the contributions of other participating divisions. As deemed appropriate, it can be expanded to other areas. In particular, it can be formulated to address the structure and management of programs intrinsically related to the 2010 census, such as the American Community Survey, the Community Address Updating System, the American Factfinder, and various address list and geographic database updating systems.

The evaluation will be conducted under contract to an external management consulting firm. The Decennial Management Division (DMD) and Decennial Systems and Contracts Management Office (DSCMO) are responsible for contract administration, defining the requirements for the evaluation, providing information to the contractor, and coordinating contacts with U.S. Census Bureau staff who may be interviewed under contract provisions. The DMD and DSCMO also will supply basic assumptions about the Census Bureau's structure, the Directorate's structure, the functions of participating divisions, and other parameters of the evaluation.

2. Topics/Questions to Be Answered

There are seven major areas to be evaluated:
-the management model for Census 2000;
-organizational structures and processes;
-decision-making process;
-management information tools;
-staffing;
-external influences; and -the use of contracts.

A. The Manaqement Model for Census 2000- The evaluation of the Census 2000 management structure will supply a comparative study of management models, including the efficacy of both the matrix (MIT/PSC) and centralized program management approaches. What were the strengths and weaknesses of the plan that was used? What were the strengths and weaknesses of the matrix method? Were there other models that should have been considered? Questions to be answered include:
How effective was each of these management approaches in helping to ensure a successful census? How well did they work for management and for staff? What are the relative strengths and weaknesses of each? What is needed for each to work? What alternative models might have worked better?
How well did the relationships and division of responsibilities among the Associate Director, Assistant Director, and individual Division Chiefs within the Decennial Census Directorate work?
How well did the DMD program management structure, which was oriented towards assigning whole program components to various organizational subunits, work? How effective was this structure in ensuring program integration across program components? How effective was this structure in collaborating with the separate staffs charged with budget/cost modeling activities, management information systems development, and communication? Is there a more appropriate management structure that would have worked better? Would a functionally organized structure, or some other combination between a functional structure and a program management structure, have worked better? How might the weaknesses in various models be addressed?
What was the relevance of timing and the impact, if any, of the management model change from the matrix to the centralized program management?
How effective was the organization in handling external relationships in an efficient, accurate, and timely manner? Where were the functions centralized or decentralized? Was this breakdown appropriate to achieve objectives? The scope of this inquiry is based on a broad definition of external relationships, including but not limited to oversight groups, the Congress, advisory committees, stakeholder interest groups and partners, the media, and the general public.

B. Orqanizational Structure and Processes- This portion of the evaluation is designed to address (1) the roles and influences of entities outside the Decennial Census Directorate; (2) the impact of participating Census Bureau divisions and offices and their relationship to the Decennial Census Directorate; (3) the organizational structure within and outside the Decennial Census Directorate; (4) the effectiveness of processes used across the organization; and (5) role definition.

What was the effectiveness of different models used by divisions and offices, such as those that created subunits dedicated to Census 2000 activities; and those that subsumed Census 2000 activities under existing or generic subunits? Did it make a difference if the Decennial Census Directorate supported staff directly or indirectly and if so how?

How effective was the mix of support provided within the Decennial Census Directorate versus outside the Directorate? Should more or fewer of the functions have been within the Decennial Census Directorate? This includes, but is not limited to, IT support; contracting and procurement support; human resources support; and the like.

How effective were the organizational relationships between the Decennial Census Directorate divisions and other areas with major Census 2000 emphasis, such as Communications, Research and Evaluations, the Technologies Management Office, the Field Division and its decentralized offices, and the like?

How effective was the communication within the Decennial Census Directorate, and between the Decennial Census Directorate and other directorates with participating divisions and offices? What methods were most effective and why? Which methods were least effective and why? What methods could be used to communicate most effectively among the participants for various purposes?

What were the roles and influences of the:

Decennial Executive Staff Steering Committee

U.S. Census Bureau Executive Staff

Department of Commerce

Economics and Statistics Administration

Office of Management and Budget

What was the relationship between the 2000 research and development program and what new operations or technologies that were actually implemented for Census 2000? What research and development projects were most useful? What areas should have been emphasized more? Which had little or no value?

Were the right divisions created with the right responsibilities, for example, the Decennial Systems and Contract Management Office and the Planning, Research and Evaluation Division? Was their tenure of the correct length?

What was the impact of the political considerations that influenced Census 2000 plans and planning?

Within the Directorate, how well did the combination of centralization and decentralization of support functions within different divisions work (in particular, LAN, administrative office, budget execution and other functions),

C. Decision-Making Process- There were several formal processes, and several .specific groups, defined for making decisions about Census 2000. This portion of the evaluation will

review both these formal structures and how decisions were actually made, particularly when timing required that decisions depart from these processes, or new influences arose. An evaluation of decision making for Census 2000 is needed in order to identify the most effective components, the types of decisions that might have been made differently, and the best ways to document and to change decisions.

> This portion of the evaluation also will examine not only the structure and processes for decision making, but will provide case studies that analyze the types of problems that occur, how problems are raised, the use of information to provide objective and comprehensive options, what influences them, and how effective the choices made are.

How effective was each of the components of the decision making process (COM, IR/CC, the Executive Staff, various steering committees, and the like)? How well did they work? How were policy decisions and issues raised and considered? How were decisions made? How were the results of the decisions disseminated to those who needed to know?
Were these the best decision making processes to use? What role did/should objective information play in decision making? Were there alternatives available at the time? What processes would have worked better?
What was the process for reaching key decisions? (For example, the process for arriving at the final design and implementation strategy for the mailed questionnaires.
What were the best ways to document and disseminate decisions quickly?
What is the best way to develop requirements and approve changes to requirements? What constitutes a requirement?
How effective were processes for change control?
How well were policy guidance, census objectives, and a vision to set common priorities handled?
D. Management Information Tools -Cost Model/Budgeting; and Management Information System (Cost and Progress, Master Activity Schedule, Analytical Tools)- This part of the evaluation is designed to examine the primary tools used to support management of Census 2000, especially the relationships among them and their use and access both within the DMD, which produced and maintained them, and other participating divisions.
How effective was each of these management tools? How well did they work, in terms such as (a) the timeliness of their development and their products, (b) ease of use and accessibility to managers; (c) the accuracy of their products; (d) flexibility in adapting to changes; (e) acceptance among managers within and outside of the Decennial Census Directorate; and (f) other relevant factors?
Were these the best systems to use? What other systems/models might have been developed to address their weaknesses?
What were the problems with not having full integration between the (a) cost model and budgeting systems and (b) cost and progress system and the Master Activity Schedule? How can full integration be achieved? How might the system be designed to assure appropriate access to, and use by, all participating managers?
What is the correct balance between having the information needed to manage our work versus the same information being available as public information?

Is there a way to restrict the use of products or management tools? A product or tool was defined for a specified need, yet frequently, the product or tool was used for a .different purpose.

E. Staffing

For each decennial division, how appropriate was the span of control for effective supervision of each branch, ADC area, or the like?

Did we have enough people at the right time?

Were various functions or subprojects adequately staffed? By adequate staff, we assume everyone should not have had to work overtime as part of the normal workday; on the other hand, there are some peak times when staff must be available for long periods. What is the appropriate benchmark to determine an adequate staff level?

By functional responsibility ,how early does an office need to increase staff to be able to meet the demands of a decennial. census?

Did staff have a clear vision as to what they should have done or who was responsible for what? This vision reflects the culture of the staff, including management. The decennial census culture may be different from the culture in the rest of the Census Bureau. There are components within each of the different cultlJreS of our organization that may help or hinder efficient operations. Do the Census Bureau and/or decennial census culture or some components need to be changed? What core competencies are needed in a decennial staff? How adequate was both formal and on-the-job training for staff? How might staff be better prepared in the future? Would rotational assignments be of benefit?

How effective was the use of term employees? Are there other, better ways to meet the ten-year cyclical nature of decennial census staffing needs?

How effective was the use of contractor staff? Should there have been more widespread use of contract staff? What are the challenges/problems and benefits of using contractor staff? Are there certain areas where contracting staff is feasible? Are there other areas where it's not feasible? Some areas made frequent or continual use of contract staff. Other areas made no or minimal use of contract staff.

F. External Influences- This portion of the evaluation is designed to examine the role and effects of various external influences, including but not limited to:

- IG
- GAO
- Office of Management and Budget
- Congress
- Other external public stakeholders
- NARA
- HUD
- NOAA and other federal agencies (such as DOJ)
- REAC and other advisory committees
- CNSTAT
- NAS
- Census Monitoring Board

The evaluation will address the effectiveness of strategies dealing with external stakeholders, and how well advisory groups might be best utilized to provide needed information and cooperation.

G. Use of Contracts. Contracting affected the way Census 2000 was managed and changed the way it operated (i.e., all components technically had to be defined up front rather than on an ad hoc basis.) This portion of the evaluation is designed to examine all aspects of specific large scale contracts including:

- administering the program
- communicating with the contractor
- contracting officer's technical representative (COTR)
- quality control of the operations
- management reports
- types of contracts

1. What impact did the contracting process have on the organization and management of Census 2000?
2. Were there effective ways to maintain interaction and communication between subject matter staff and contract staff but minimize the modification of contracts?
3. Were COTRs used effectively in the contracting process?
4. Did the quality control measures established assure the quality of the final product(s)?
5. What management issues should decennial census managers make high priority to improve our effectiveness in working with contractors?

3. Evaluation Methodology

Obtain contractor support to

- evaluate all aspects of the organization, staffing, decision making processes, external influences, contracting processes, and work management processes.
- evaluate the tools used in terms of software or applications, particularly the budgeting and management information tools. The Cost Model, the MAS, and the C&P system will be evaluated as a processes
- do the evaluation using structured interviews, analysis of alternative models, benchmarking, and the like.
- use actual decennial census case studies, if available, for the analysis.
- identify and record lessons learned as applicable to the management process. consider the combined goals of managing the successful completion of the work in a timely and accurate manner with sufficient controls, and managing the external census, such as, the political involvement, public influence, and other factors that influenced the environment in which we worked.
- provide specific recommendations for improving the management of the next decennial census.

This evaluation will be divided into three phases. In the first phase the contractor will address the Management Model for Census 2000, the Organizational Structure and Processes and the Decision-Making Process. In the second phase the contractor will examine the Management Information Tools, the External Influences and the Use of Contracts. In the final phase information from the earlier phases will be integrated and a final evaluation report will be developed and presented. Briefings will occur for each interim report.

4. Data Requirements

- Staffing data
- System specifications
- Program Master Plans
- Management Plan

5. Division Responsibilities

- DMD and DSCMO will manage this contract
- PRED will provide QA support
- DMD and DSCMO will manage this contract.

6. Data Products

- Study plan including: methodology, questions, schedule, and budget.
- Notebooks containing documents used in doing this evaluation.
- Interim reports.
- Final report including oral and written presentations.

7. Cost Information

CONTRACTS	FY01
	Estimated cost: $2 million

8. Milestone Schedule

Activity	Start	Finish
Prepare study plan	9/30/00	11/21/00
Obtain study plan approval from division chief		11/27/00
Transmit approved study plan to PRED		11/28/00
Prepare SOW	08/10/00	11/27/00
Issue RFP/Task Request		12/07/00
Conduct evaluations	02/05/01	02/23/00
Award contract		03/01/00
Conduct post award meeting	03/05/01	
Receive revised work plan		03/30/01
Deliver work plan to PRED		04/02/01

Phase 1

Contractor delivers draft survey instrument		04/02/01
Contractor delivers final survey instrument		05/30/01
Contractor conducts interviews- Phase 1	06/04/01	08/16/01
Phase 1 Interim report due		09/20/01

Phase 2

Contractor delivers draft survey instrument -Phase 2		08/06/01
Contractor delivers final survey instrument	09/07/01	08/31/01
Contractor conducts interviews -Phase 2		10/18/01
Phase 2 interim report due		11/08/01

Phase 3

Draft final report due	12/14/01
Executive Briefing report	01/21/02
Final report due from contractor	

9. Limitations

The success of this review is dependent upon two key factors. The perception of those persons participating in the interview process can significantly influence the quality of information gathered. For instance, if there is a lack of communication about the purpose of the review, less than optimal results will be obtained and the findings may lack depth. The contractor conducting this evaluation will be requested to preface each interview with an explanation about its purpose in order to gain user understanding and commitment. A key factor in gaining such commitment and a willingness to answer questions is to stress that the review will be a balanced assessment. This approach can often reduce concerns about hidden agendas.

10. Related Studies

The following studies are related to this evaluation
Census 2000 Staffing Programs -G.1
Management Information System -R.3.c

11. Issues That Need to be Resolved

The only issue that needs to be resolved is the selection of a contractor to perform this study. That process is underway and should be completed in early 2001.