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# CENSUS: LEARNING LESSONS FROM 2010, PLANNING FOR 2020

## HEARING

BEFORE THE

FEDERAL FINANCIAL MANAGEMENT, GOVERNMENT INFORMATION, FEDERAL SERVICES, AND INTERNATIONAL SECURITY SUBCOMMITTEE

OF THE

COMMITTEE ON
HOMELAND SECURITY AND
GOVERNMENTAL AFFAIRS
UNITED STATES SENATE

ONE HUNDRED TWELFTH CONGRESS

FIRST SESSION

APRIL 6, 2011

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# CENSUS: LEARNING LESSONS FROM 2010, PLANNING FOR 2020

**WEDNESDAY, APRIL 6, 2011**

U.S. SENATE,
SUBCOMMITTEE ON FEDERAL FINANCIAL MANAGEMENT,
GOVERNMENT INFORMATION, FEDERAL SERVICES,
AND INTERNATIONAL SECURITY,
OF THE COMMITTEE ON HOMELAND SECURITY
AND GOVERNMENTAL AFFAIRS,
*Washington, DC.*

The Subcommittee met, pursuant to notice, at 1:30 p.m., in Room SD–342, Dirksen Senate Office Building, Hon. Thomas R. Carper, Chairman of the Subcommittee, presiding.

Present: Senators Carper, Brown, and Coburn.

## OPENING STATEMENT OF SENATOR CARPER

Senator CARPER. The hearing will come to order. Welcome one and all. Senator Brown and I are happy to see you all. Thank you for joining us today on an important hearing, a very important hearing.

I am going to make a brief statement and then turn it over to Senator Brown, and then we will introduce our witnesses and get this show on the road.

Today's hearing will examine the lessons learned from the 2010 Census while identifying initiatives that show promise for producing an even more accurate and more cost effective census in 2020.

I want to begin by congratulating Dr. Groves; his predecessor, Dr. Murdock, who sat in this seat once or twice himself when he was our Census Director; and the career professionals at the Census Bureau who did an excellent job in carrying out the 2010 Census. As a result of their hard work, the Census Bureau was able to overcome a number of operational and organizational challenges, including shortcomings with critical information technology systems.

The Bureau completed key operations on schedule, hired nearly 900,000 temporary workers, obtained an acceptable participation rate ultimately of 74 percent, and managed to report its population figures in time to support redistricting so that we would know in Delaware we still would have only one at-large U.S. Representative.

Despite these achievements, the 2010 Census was the most expensive in our Nation's history by far, even taking inflation into account. The total cost of decennial operations escalated from an ini-



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tial estimate of $11.3 billion to close to $13 billion. Even more disturbing is the fact that with all the modern scientific improvements and technological advancements that have been made over the years, the framework for conducting the 2010 Census was based off of a model that I believe was used in the 1970s.

Although the methodological basics of the census have remained the same over the past 40 years, the cost of the census decidedly has not. The average cost per household was $98 in 2010, compared to $70 in 2010, compared to $16 in 1970. I have been told that the total cost of the 2020 Census could rise to as much as $30 billion if we keep going on this track. In my view, that is not acceptable any more than budget deficits of $1.2 trillion are acceptable. It is especially not acceptable at a time when we are struggling to find solutions to the most serious deficit problems and the debt crises that our country is currently facing.

We have spoken at previous hearings here about the need for us to look in every nook and cranny of the Federal Government—domestic, defense, entitlement spending, along with tax expenditures—and ask this question: Is it possible to get better results for less money? The hard truth is that many programs' funding levels will be reduced. They need to be reduced. Even some of the most popular and worthwhile programs out there will likely be asked to do more with less, or at least to do more without a whole lot more money. The Census Bureau, despite the vital and constitutionally mandated nature of its work, cannot be immune from this sort of examination.

While most Americans want us to reduce the deficit, determining the best path forward will not be easy. Many believe that those of us who have been sent here to Washington are not capable of doing the hard work and making the hard decisions that we were hired to do—effectively managing the Federal dollars, their tax dollars that they have entrusted us with. They look at our spending decisions that we have made in recent years and question whether the culture here is broken. They question whether we are capable of making the kind of tough decisions that they and their families have to make on an almost daily or weekly basis with their own budgets. And I do not blame them for being skeptical, and I am afraid that their skepticism proved to be well founded when looking at the kind of avoidable management failures that contributed to the growth in cost of carrying out the 2010 Census.

Today we will look at the Bureau's planning efforts for the 2020 decennial, and although it is 9 years away, it is never too early to start thinking about ways to reduce costs and improve quality through more efficient data collection. More importantly, we need to make certain that the issues that lead to the failures and cost overruns that we saw in recent years have been addressed and will not reoccur. Taxpayers should not be expected to pick up the tab for them again.

Looking ahead, the Bureau's research should focus on how existing technology can be incorporated into the 2020 design. Obviously, the Internet is here to stay, at least for my lifetime, and according to the experts, an Internet response option could have saved the Bureau tens of millions of dollars in processing costs in 2010. Future research should not only focus on how to implement Internet

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data collection but also how to reap the benefits—financial and otherwise—of it and other technologies the next time around. We also need to make certain that the people who make up our growing and changing country are comfortable enough with the security of the data collection methods we use to allow for an accurate census.

Moreover, steady leadership will also be critical in reversing a trend of decennial Censuses marked by poor planning and escalating costs. The 2010 Census experienced several changes in leadership and vast spans of time with acting or interim Directors, further putting the operation at risk. In the 27 months leading up to Census Day, the Bureau had, count them, not one, not two, but three different Directors. I plan to introduce legislation this year that would, among other things, make the Director of the Census Bureau a Presidential term appointment of 5 years. A fixed term would help avoid leadership gaps during critical decennial Census planning stages and facilitate the longer-term planning so vital to decennial Censuses.

Senator Coburn and I introduced legislation last year to establish a term appointment for the Census Director and to make a number of other changes at the Bureau aimed at preventing serious problems in the future. It passed the Senate unanimously but failed to be taken up in the House. And I would like to work with you, Dr. Groves, if I can, if we can, to make whatever changes are necessary to put together something that addresses the lessons learned from 2010 and can enjoy bipartisan support as our proposal did in the last Congress.

We look forward to hearing from our witnesses today who will help us to identify ways to best balance the need for an accurate census with the need to ensure a reasonable cost for this endeavor.

Senator Brown, 10 years from today, I suspect you will still be here, but I am not sure that I will be. I might, but I would not want to bet on that. But whoever does sit in the seats where you and I sit, I do not want them to be saying, "How do we end up spending twice as much for the census in 2020, as we spent in 2010? How did we do that?" That is what we did from 2000 to 2010, and we have done it again. I just do not want the folks in this Committee to go through that. I do not want the Senate to go through that. I do not want the people of our country to go through that. And I know the groundwork is already being laid today this year to make sure that we do not see history repeat itself. And we are anxious to learn how we can help to make sure that we end up in 9 years from now that we have a better count, a more accurate census, and we have done it not for twice as much money but maybe, if we are smart, the same amount of money.

All right. Scott.

## OPENING STATEMENT OF SENATOR BROWN

Senator BROWN. Thank you, Mr. Chairman. Just to note I am bouncing back and forth to the hearing, so I will only be able to stay for the first panel, depending on the time. But I do appreciate the opportunity to come. Sir, it is good to see you again.

As required by our Constitution, as you noted, our country has conducted a census every year since, obviously, 1790, and it is a vital undertaking. The results, are utilized to apportion seats in

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the House, for redistricting, and determining the annual distribution of more than $400 billion in Federal and State funds. And while we must strive to ensure that every person is counted, we cannot afford to have the out-of-control spending that seems to be potentially going—well, going on and getting worse continually.

The cost of counting each housing unit has escalated from around $16 in 1970 to $98 in 2010, and I have learned in my brief tenure here that we cannot simply continue to do things the way we have always done them. We have to think outside the box, modernize, get up with the times. I feel sometimes that I am—I know we used to have records, the little needle—I tell my kids and younger people, I say, "I used to listen to records." They look at me like I have three heads. And sometimes—I mean, you all know what I am talking about, what a record is. But you look around, and you see how we do stuff in the Federal Government, and it is like I feel like I am back in the 1970s, talking about records, whether it is the Arlington National Cemetery and they keep wounded—our fallen heroes on cue cards, index cards, or—I just do not get it, with the amount of money that we spend on these things. So we have to find a way to do it better, to get a better bang for our buck.

And for the most part the basic model of census taking has not changed since the 1970s, and we need to update, we need to streamline, consolidate, do it better. And we are relying on the old-school way of doing things, and it is just not, I do not think, working just based on the costs that we are seeing and we will be talking about.

With an array of Internet-based technologies, you have Facebook, Twitter, IMs, the whole range of ways that we can do it better, and I am hoping that we can kind of, with your leadership, sir, as we talked about, do it better.

We are the world leader in inventing and commercializing technology and technological innovation, and it is something, being from Massachusetts, and Cambridge in particular—that is where it all begins. That is where the think tanks, many of them, are in our great country. And yet it seems like we are lagging behind a country like Canada, for example, in integrating the Internet into the census.

I am convinced that we can break this cycle and do it better and be more cost effective, and I am excited to have the opportunity to discuss that with you. And while I expect the Census Bureau to say the right things about reforming the process in 2020, I have been here long enough, a little over a year, to know that the taxpayers and Congress have the right to remain skeptical based on past performance, not necessarily of this organization but of what we see throughout government today. And I am going to work with the Chairman, as we do on many, many things, to try to find a way to bring it out and potentially offer solutions, suggestions, find out how we can help through legislative or other types of either making regulation or eliminating regulation, and, finally, how we can get our tax dollars to be spent in a more efficient manner.

I look forward to the witnesses speaking, Mr. Chairman, and I want to thank you once again for holding this hearing.

Senator CARPER. You bet. I am glad we could do it together.

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I am going to go ahead and introduce our panel. I think maybe—I might be mistaken, but I think you have all been here before, maybe a couple times. It is a good thing, Senator Brown, that we are not paying them on a per appearance basis. That would get pretty expensive.

Let me just welcome, first of all, Dr. Groves, nominated by President Barack Obama to be Director of the Census in April and confirmed by the Senate last July. Dr. Groves is an expert in survey methodology and has spent decades working to strengthen the Federal statistical system, improve its staffing through training programs, and keep it committed to the highest scientific principles of accuracy and efficiency. Having once served as Associate Director of the Census Bureau, Dr. Groves knows how the agency operates and what its employees need to successfully implement the decennial Census and other programs. Welcome. Nice to see you again.

Todd Zinser, also known as the Honorable Todd Zinser—and I was kidding him earlier when I came out here, Senator Brown, to say hello. I do not know if this ever happens. Do you know that every now and then we get phone calls at home from people, and we have these Do Not Call lists, and still people call. And if they were, like, calling from, like, the University of Michigan or Ohio State or someplace like that, and one day I got this call from a fellow at the other end of the phone, and he said, "Is Hon there?" And I said, "Pardon me?" And he said, "Is Hon there?" And I was trying to think, "Who could he be calling for?" And then I was thinking, "Oh, Hon. H–O–N period, short for 'Honorable.'" And so I said, "This is Hon." [Laughter.]

And he said, "Oh, Hon, how are you doing?" I forget where he was calling from. But he said, "I am calling from so-and-so, and you have been great to support our charity or trust before. I just wanted to call and see if you could do it again." And I said—so he made his pitch, and I said, "Hon have no money." And he gives me about another 30 seconds, and I said a little more strongly, "Hon have no money." And he comes back to me a third time and gave me his pitch, and I said, "Hon have no money. Call Hon Castle." That is Mike Castle, our Congressman. "He has the money." And so he said good-bye and he never called back. [Laughter.]

But Hon. Todd Zinser, welcome. Todd serves as the Inspector General for the U.S. Department of Commerce. As Inspector General, Mr. Zinser leads a team of auditors, investigators, attorneys, and administrative staff responsible for detecting and preventing fraud, waste, and abuse in a vast array of business and scientific and economic and environmental programs that are administered by the Department of Commerce and its 13 Bureaus. Mr. Zinser holds a bachelor's degree in political science from Northern Kentucky University and a master's degree in political science from Miami University. Is that Miami University in Oxford, Ohio?

Mr. ZINSER. Yes, Senator.

Senator CARPER. All right. Home of the Bobcats? Is that what they are there? Ohio University? I think so. We are Buckeyes at Ohio State.

Robert Goldenkoff is the Director of Strategic Issues at the Government Accountability Office (GAO) where he is responsible for reviewing the 2010 Census and governmentwide human capital re-

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forms. Mr. Goldenkoff has also performed research on issues involving transportation security, human trafficking, and Federal statistical programs. He received his Bachelor of Arts in Political Science and his Master's of Public Administration degree from The George Washington University. All right.

Your entire statements will be made part of the record, and once you have concluded, I am going to ask Senator Brown to take the first questions, and then I will take my nap while he is doing—no, I will not do that. But I will be listening intently to the questions and the answers.

But, Dr. Groves, it is great to see you. Thanks for taking on this job. You are recognized. If you go a whole lot over 5 minutes, I have to rein you in, so just keep that in mind. Thanks so much. Please proceed.

**STATEMENT OF HON. ROBERT M. GROVES,[1] DIRECTOR, U.S. CENSUS BUREAU, U.S. DEPARTMENT OF COMMERCE**

Mr. GROVES. Mr. Chairman, Senator Brown, I am happy to be here and thank you for the invitation.

Although the Census Bureau has a formal program of evaluations and assessments on the 2010 Census, those are not yet complete. But I do have information I can share on preliminary quality indicators.

My testimony in written form is really in three pieces: Evaluation of the census, our organizational change endeavors at the Census Bureau, and then lessons learned. I am going to concentrate on the third part. But I can note that the preliminary findings on the quality of the 2010 Census are positive in the majority and show improvements over the 2000 effort. I would be happy to expand on that.

I want the Committee to know that we have also been engaged in a variety of organizational change initiatives that we care deeply about. We have basically concluded that our business model of collecting social and economic data faces severe challenges over the long run. We know we must innovate in order to remain useful and relevant to the country. Further, we know that this innovation is not likely to be funded by added resources. We must become more efficient and fund innovations from cost-saving measures, and that is what these programs are about. I want to mention three specifically.

First, we have mounted a program that is seeking proposals from throughout all the employee groups for cost efficiencies. It was heart-warming to see last year that we received over 650 proposals from folk throughout the Census Bureau on how to make what they do more efficient, and we are pursuing a lot of the good ideas and saving money already.

Second, we have partnered with other Federal agencies who sponsor surveys that we collect data for in order to find out ways that we can save money for them. This will have ripple effects to other agencies.

[1] The prepared statement of Mr. Groves appears in the appendix on page 46.

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Third, we are vigorously trying to tear down the boundaries among the silos of the Census Bureau. We are trying to seek organization-wide solutions. Let me rattle off a few of those.

We have instituted a corporate hiring program for new statisticians to assure that they will move across the organization in the early years of their career spreading innovation across the silos.

We are moving aggressively on enterprise architecture solutions on the information technology (IT) front. This means a greater emphasis on the Internet and cloud computing, a consolidation of data storage systems that is already saving money. We have built the Technology Innovation Center to do quick prototyping of new solutions.

We have greatly expanded our Internet data collection, soon to cover 60 of our sample surveys, allowing approximately 900,000 respondents the opportunity to respond online. And I want to note that increasingly people are using the Internet options we are providing on hand-held devices like iPhones and Droids and iPads.

These changes together, in my belief, will make us a more unified, integrated organization, one that is ready to mount a successful 2020 Census, and that is what I want to turn to now.

I want to go through eight lessons that I have learned personally, each of which has generated a principle for the organization of the development plans for 2020.

Lesson one, the multi-decade cost increase of the decennial Census must be halted. Hence, we are attempting to design a 2020 Census that costs less per housing unit than the 2010 Census while maintaining the quality of the results.

Lesson two, the traditional non-response follow-up procedures that we have used over past decades are inefficient and costly. We want to make the census convenient to diverse groups using multiple modes of data collection. This means the traditional mail, but also phone, multiple Internet options, face-to-face, and other modes as they emerge.

Lesson three, systems development that requires first-use perfection must be abandoned. We need end-to-end tests of production systems, ideally within real survey production environments.

Lesson four, too few of the system and procedure developments of the 2010 Census were designed to benefit the entire institution. Thus, the fourth principle is that we want to develop systems within the survey production environments of the Census Bureau. We plan to use the American Community Survey as a chief test bed for the 2020 Census systems development.

Let me skip to lesson six. We have concluded that a small number of large test censuses create intolerable risks for the Census Bureau. We want to do many small tests. We feel that the evidence of updating the Master Address List was partially—that partial updating in the last decade was successful. We want to build on that success.

Let me sum up. Overall, we know of no single method of collecting census data that is optimal for all the diverse subpopulations of the United States. Some residents have told us they do not want people visiting their home. Some residents told us that information they have already provided in other government forms ought to be used. Some residents want to use the Internet at any

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time of the day on any device they favor to fit their lifestyle. And some want to speak by telephone to someone who speaks their language and understands their subculture.

By making the census more convenient, we hope to reduce the size of the expensive field follow-up activities. This is the most important and most expensive part of the data collection. We are concentrating our efforts there to achieve a quality census.

Those are my oral remarks. I would be happy to answer questions.

Senator CARPER. Well, thanks for those oral remarks. We look forward to those questions and answers.

Mr. Zinser, please proceed.

**STATEMENT OF HON. TODD J. ZINSER,[1] INSPECTOR GENERAL, U.S. DEPARTMENT OF COMMERCE**

Mr. ZINSER. Thank you, Mr. Chairman, Senator Brown. Thank you for inviting us to testify today about lessons learned from the 2010 Census and how we might apply those lessons to the decennial Census in 2020.

The 2010 decennial was an enormous undertaking with a current cost estimate of nearly $13 billion. It required more than a decade of planning, testing, and implementing dozens of operations as well as hundreds of thousands of employees, to accomplish.

My testimony today is based on oversight we provided over the last decade to both the planning and execution of the decennial. Our oversight sent over 100 Office of Inspector General (OIG) staff to every State and the District of Columbia. We provided feedback to stakeholders on headquarters activities and from the field through reports, testimony, and real-time communications back to the Census Bureau.

While the census has successfully completed its 2010 operations, this decennial carried with it a high cost and a level of risk that should not be repeated. Factoring in trends in population and cost growth, GAO recently estimated that the current design model could mean a 2020 decennial cost as high as $30 billion. Such cost growth is simply unsustainable.

To achieve a quality count with much greater cost containment, Census must fundamentally change the design, implementation, and management of the decennial Census, and it must start now. My testimony today covers seven challenges for the Census Bureau to address for the 2020 Census.

First, Census must revamp their cost estimation and budget processes to increase accuracy, flexibility, and transparency.

Second, Census should use the Internet and administrative records to contain costs and improve accuracy. There are already numerous Federal agencies that collect similar information about U.S. households at significant duplicated costs. Use of existing administrative records could greatly assist Census in reducing the cost of many of its operations. It is a complex issue but not insurmountable, and a solid commitment to use the Internet for 2020 is imperative.

[1] The prepared statement of Mr. Zinser appears in the appendix on page 56.

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Third, Census should implement a more effective decennial test program. Site tests for 2010 were scheduled at 2-year intervals. Each test transpired over 3 years of planning, implementation, and evaluation. The tests overlapped, which made it difficult to apply the results from one test to the next. Census now plans to conduct a larger number of smaller tests and more closely align its research with its testing program.

Fourth, Census should effectively automate field data collection. Census tried to maximize the use of automation for the 2010 decennial but fell short, and as a result, costs and risks increased substantially. Census must shore up its IT processes early in the decade to prepare for successfully implementing automated data collection.

Fifth, we recommended that Census avoid a massive end-of-decade field operation through continuous updating of address lists and maps. Instead of the large end-of-decade address canvassing operation, which cost $444 million and experienced a 25 percent cost overrun, Census is planning to update its address lists and maps continuously throughout the decade and is considering other options to meet its address and map requirements.

Sixth, the Bureau should implement improved project planning and management techniques early in the decade. For the 2010 decennial, Census tracked more than 9,000 activities over several years for 44 different operations. We have made recommendations aimed at strengthening project and risk management.

Finally, a Census Bureau Director position should be established to span Administrations. For the life cycle of the 2010 decennial, we counted six Directors and Acting Directors. Census would benefit from greater leadership continuity.

Census has already embarked on its plans; however, it will need continued focus, engagement, and resources throughout the decade from the Department of Commerce, the Office of Management and Budget (OMB), and Congress to help ensure that the 2020 Census fulfills the promise of better technology, methods, and operations.

That concludes my summary, Mr. Chairman, and I would be happy to answer any questions you or other Members have.

Senator CARPER. Good. And I will just telegraph an early pitch, Dr. Groves. When the questions come to me, one of the questions I am going to be asking is for you to walk through that list of seven recommendations from Mr. Zinser, and I want you to be prepared to comment on those, please.

Mr. Goldenkoff, please proceed.

## STATEMENT OF ROBERT GOLDENKOFF,[1] DIRECTOR, STRATEGIC ISSUES, U.S. GOVERNMENT ACCOUNTABILITY OFFICE

Mr. GOLDENKOFF. Mr. Chairman, Senator Brown, I would like to thank you for the opportunity to be here today to discuss lessons learned from the 2010 Census and initiatives that show promise for delivering a more cost effective enumeration in 2020.

The 2010 Census was an operational success in that the Census Bureau generally completed its peak data collection activities consistent with its plans and released the data used to apportion and

[1] The prepared statement of Mr. Goldenkoff appears in the appendix on page 72.

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redistrict Congress several days ahead of legally mandated deadlines. Nevertheless, in gearing up for the enumeration, the Bureau had to overcome a series of hurdles that jeopardized a complete count.

First, internal issues, including longstanding weaknesses in its IT management procedures, threatened the Bureau's readiness for the enumeration and led us to add the 2010 Census to GAO's list of high-risk Federal programs.

At the same time, external societal trends, such as an increasingly diverse population, have made a cost-effective head count inherently difficult. Much like going up a down escalator, over the past 40 years the Bureau has been investing substantially more resources each decade in order to secure a complete count.

For example, as Senator Brown noted earlier, in constant 2010 dollars the cost of enumerating each household has escalated from around $16 in 1970 to around $98 in 2010, an increase of over 500 percent. This trend is unsustainable.

Meanwhile, the 2010 Census, with a total cost of around $13 billion, was the most expensive head count in our Nation's history.

Simply put, the singular challenge facing the U.S. Census Bureau is how to control the cost of the 2020 Census while maintaining its accuracy. In this regard, my remarks today will focus on four key lessons learned from 2010 that will be important for the Bureau to address as it continues its planning efforts for 2020.

The first lesson learned is the importance of fundamentally re-examining the Nation's approach to taking the census. This is critical because simply refining current methods, some of which have been in place for decades, will not bring about the reforms needed to obtain acceptable results given ongoing and newly emerging societal trends. A fundamental re-examination means rethinking the Bureau's approach to planning, testing, implementing, monitoring, and evaluating the census. Potential focus areas include making better use of administrative records, such as driver's licenses, as well as social media, such as the Internet.

The second lesson learned is the importance of tailoring key census operations to specific locations and population groups. The Bureau plans to complete over 70 studies of the 2010 Census. As this research is completed, it will be critical for the Bureau to assess the costs and benefits of each operation so it can allocate its resources more efficiently in 2020.

The third lesson learned centers on institutionalizing efforts to address those areas that made the 2010 Census a high-risk area. This includes incorporating best practice for IT acquisition management, developing more reliable cost estimates, and ensuring key operations are fully tested under operational conditions.

The fourth lesson learned involves ensuring that the Bureau's organizational culture and structure as well as its approach to strategic planning, human capital management, and other internal functions are aligned towards producing more cost-effective outcomes. These actions are needed because some of the operational problems that occurred during the 2010 and prior censuses were symptomatic of deeper organizational issues, such as inadequate human capital planning.

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Importantly, the Bureau has launched an ambitious planning program for 2020, taking such measures as reforming aspects of its IT management. As these actions gain momentum, it will be important that they enhance the Bureau's capacity to conduct an accurate count, control costs, manage risks, and be more nimble in adapting to the social, demographic, technical, and other changes that can be expected in the future.

In closing, the Bureau goes to great lengths each decade to improve specific census-taking activities, but these incremental modifications have not kept pace with societal and technological changes. The Bureau is well aware of this and has wasted no time in launching the planning efforts needed for a more cost-effective enumeration in 2020.

It will also be important for Congress to continue its strong oversight of the census, and we look forward to supporting the Subcommittee in this regard.

Mr. Chairman, Senator Brown, this concludes my remarks, and I will be pleased to respond to any questions that you might have.

Senator CARPER. Mr. Goldenkoff, thank you very, very much.

First of all, let me just ask you, if I could, Mr. Zinser and Mr. Goldenkoff, you heard Dr. Groves testify here today, and you have heard him testify a number of times before and have worked with him to help ensure that we get a better count going forward for less money. What did you hear from Dr. Groves today that you were especially pleased to hear? And what were the things that you did not hear that you wish you might have? Do you want to go first, Mr. Zinser.

Mr. ZINSER. Yes, I also had the opportunity to review Dr. Groves's testimony before we came up today, and I have to say that I think that Dr. Groves's observations, the observations from my office, and Mr. Goldenkoff's observations are all right on the same page. I think that we are pretty much in agreement with what Dr. Groves has laid out. And I think that what we would want to see more of is more attention paid to some of the nuts and bolts management issues for budgeting and project management.

Senator CARPER. All right. I am going to suspend right there. I said I wanted to ask Senator Brown to lead off because he has another hearing to run off to. I will come back and pick that up where we started.

Scott, I am sorry. You go right ahead. Thank you.

Senator BROWN. Thank you, Mr. Chairman.

So, Mr. Groves, the growth of completing the census has been unsustainable, as I talked about in the beginning, and where the measures of cost of counting each household, which has grown from $16 to $98 in 2010, from $4.1 billion to over $12 billion from 1990 to 2010, and we cannot continue on. In your opinion, what has caused the explosive growth?

Mr. GROVES. I think if you look over the decades, there are several drivers of it. One has to do—most of the drivers could focus in on the non-response follow-up procedures. People are sent mail questionnaires over the past decade—

Senator BROWN. How much does the mail actually cost? Like, what does one of the mailings—because I know I got about 30 of them. That was after I sent it in.

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Mr. GROVES. Well, what we said throughout the census this year, last year, was to return the mail questionnaire costs about 42 cents. To call on your household costs us about $57. So that is the ratio that is so important in addressing your question.

Senator BROWN. So it is still better, more effective, to do it via mail.

Mr. GROVES. Yes. If mail worked 100 percent, it would be a very cheap census. It is a technique that works when it works. The problem is those rates are going down. As your chart[1] shows, the black line is—the cost and the line are related to one another.

When the returns do not come in, then we go out and knock on doors. We knocked on 47 million household—

Senator BROWN. So you are saying that this—and people just looking, so that chart above the heads of everybody is the reduction, the 63 percent, which is the mail response rate and the money, the $98 million projected. That is not just mail. That is the follow-up of the phone calls, the door knocking. That is the whole shebang after.

Mr. GROVES. Absolutely. And so this decade, we knocked on 47 million household doors, and that cost a lot of money. So if you say how do you stop that trend, we are focusing on that follow-up procedure. What is driving those costs? And how do we reduce the number of households that require that expensive personal visit?

Senator BROWN. And I know we had this conversation, so everyone who is listening is clear. So this is just people in households. This has nothing to do with people that are here legally or illegally. It is just people, period, right?

Mr. GROVES. Our mandate under the Constitution, under the Census Act of 1790 that has been renewed, is that we count all residents.

Senator BROWN. Whether they are here legally or not.

Mr. GROVES. Correct.

Senator BROWN. So do we have an accurate count of how many U.S. citizens are here?

Mr. GROVES. The decennial Census does not have a question about citizenship.

Senator BROWN. Isn't that a little unusual? We are trying to find out, like, who is here, and we are giving monies to States and we are trying to make determinations as to who is representing who in Congress, and we do not even know how many U.S. citizens are in the States?

Mr. GROVES. For purposes of the decennial Census under the law—

Senator BROWN. Yes, but from—

Mr. GROVES [continuing]. We count all—

Senator BROWN. I know, but does it seem unusual that we would not do it that way as well and find out, okay, we have households and—and, by the way, we need to find out how many people are here who are United States citizens so we can divvy up the funds properly. Does that make sense, or am I missing something?

[1] The chart submitted by Senator Brown appears in the appendix on page 147.

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Mr. GROVES. There is a wonderful phrase in the Constitution, Article I, Section 2, that notes that Congress shall by law direct how the census is done.

Senator BROWN. Right.

Mr. GROVES. And I believe Congress has the power to change that.

Senator BROWN. And I believe that is what we kind of talked about. We had a little bit of a go-round, and I appreciate you being consistent in making that recommendation. I am not sure if there is an effort to make that determination and give congressional guidance or change to do that.

What performance measures should Congress track to ensure that the census keeps its promise to lower costs per housing unit in the 2010 and 2020 Census in the future?

Mr. GROVES. I think there are various things that could be done, and they all go under the rubric of watching us over the early years of this decade. That is going to be key, to attend to our progress. We have constructed an integrated set of research steps that answer key questions, and every one of the questions is related both to cost and quality of the census. So we are going to be producing those answers over the coming years, if we are funded to do this. You should hear those answers, and you should be satisfied with those answers that we are moving in the right direction to keep that focus. It is critical.

Senator BROWN. Could you do your job with half the money?

Mr. GROVES. I do not know the answer to that. I think it is unlikely. I need to—

Senator BROWN. Can you do it with $98 million for the next go-round in 2020?

Mr. GROVES. For $98 million or for—

Senator BROWN. Or $98 per household. Do you—

Mr. GROVES. I see. Per household. Well, I can tell you our goal is to reduce that red—

Senator BROWN. Yes, what is the goal? Is it—to what? Do you have a number you are trying to shoot for?

Mr. GROVES. We do not have a number. Let me tell you how we are addressing the cost estimation because this is relevant to Robert's comments. We are doing modeling of different cost outcomes based on different scenarios, different assumptions. Our research is basically going to tell us as the months go by which of those assumptions are correct. So we will narrow in on the cost. But every research question we are addressing has cost impacts, and we want to share with you those answers to keep us honest on cost reduction.

Senator BROWN. I want to apologize. I know the numbers we went over the other day and obviously earlier. I know it is about $12 billion to actually do what you did, and this is per household, $98. That is why I have these, and I do not use them enough, so I apologize.

The 2000 Census included an Internet response option, yet the 2010 Census did not as the census, again, relied on the same kind of mail-out, mail-back method used for decades. Meanwhile, the cost has escalated. Why decades into the Internet revolution did it not contain that option?

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Mr. GROVES. This decision was made in the middle of the decade between 2000 and 2010. The reasons, I have been told, that led to that decision were concerns about security, IT security issues.

At this point those are not valid. We are doing large numbers of sample surveys using the Internet. We have conquered the IT challenges on this quite successfully. As your chart shows, there are other countries that have been doing this for some time. We can do this. We are doing it.

Senator COBURN. Do not give him credit for my chart.

Mr. GROVES. Oh, I am sorry. Sorry.

Senator BROWN. I am not. I am just reading down the order they gave me the questions here. [Laughter.]

On that note I am not going to get the big guy mad, so here, I am all done.

Senator CARPER. Dr. Coburn, why don't you jump in here. Reclaim your chart.

Senator BROWN. I have seen his wrath.

Senator COBURN. First of all, I want to say publicly how enthused I am that we have very super competent leadership at the Census, and I have great faith in Dr. Groves. I have seen what he took on, how he accomplished his mission, and his commitment to using science to make his organization more efficient. I am one of your big backers. I told you that in my office, and I appreciate the job that you have done and the people under you that have helped you accomplish that.

How much do we spend on the American Community Survey (ACS) every year?

Mr. GROVES. It is roughly $200 million.

Senator COBURN. $200 million, and do you have plans to put the American Community Survey online?

Mr. GROVES. We are actually in the middle of an Internet test on the ACS. It is a bigger challenge, I need to tell you, than the short form—

Senator COBURN. Well, I understand.

Mr. GROVES. But we are testing it right now.

Senator COBURN. Just for history, the reason it was not on the Internet is there was a contract between Lockheed Martin and the Census to do an online test, and they came up with a garbage excuse that they could not manage the security when 72 percent of the income tax that is paid in this country, is online.

This chart comes from England. I saw this in the paper last week, and I said I have to bring this and show this to Dr. Groves. The fact is that they are advertising, and they are saying get it done. Lockheed did it. The very contract we turned down they did for Great Britain, and it is working wonderfully over there.

So we know it is possible I will not go through all of the questions that I have on Internet, but I think it is important. I know you are committed to bringing us up to speed, and we are going to save hundreds of millions of dollars annually if, in fact, we accomplish this task.

What are the main management and operational challenges that you really faced during the 2010—I do not want you to take a long time with it, but what were your two big challenges? And how did you address them?

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Mr. GROVES. Well, we had a fantastic team, I want you to know. The folks that followed up on the replanning efforts produced a lot of saved operations. The chief challenges were software challenges. We had a system that monitored the work flow that was not working properly for about 3 weeks. That was a scary time. We got it working, and it actually really purred along at the end. But the first few weeks were kind of scary.

We were—well, let me stop at that. That was the chief management threat that we had.

Senator COBURN. OK. For our GAO and IG witnesses, have either of you done any estimates on what you think the cost savings could be if we utilized the Internet in the census?

Mr. ZINSER. We have not done an estimate like that, sir.

Senator COBURN. OK. GAO?

Mr. GOLDENKOFF. We have not either. You should know that there are some large up-front costs getting the system up and running, and those costs would need to be offset by the higher response rate. But we have not done any estimates as of yet.

Senator COBURN. It is important that we go to the IRS and say, "What are the problems you had in getting this going?" In other words, we learn from our experience rather than try to do it again. I hope that we are going to be doing that in terms of good correlation with their experiences and how they got this up and running and got the security going. We do not have to reinvent it every time we do something in the Government in terms of IT.

Dr. Groves, let me go to one other question. Senator Brown asked you, Do you have the power to change the questions on the census?

Mr. GROVES. On the decennial Census?

Senator COBURN. Yes.

Mr. GROVES. The process by which the decennial Census questions are arrived at is a laborious one that brings in a whole lot of stakeholders. We then submit the questionnaire to Congress in the year that ends in 6, I think, and again in 7 for your review. So it is truly a collaborative process.

Senator COBURN. Do we actually act on that?

Mr. GROVES. I think that has varied over decades, Senator, on how Congress has reacted to that.

Senator COBURN. Following up a little bit on Senator Brown, we could have a question in the decennial Census that asked: Are you a U.S. citizen? Are you a legal resident? Are you other?

Mr. GROVES. That is a possible census—

Senator COBURN. There is nothing that precludes us from asking that?

Mr. GROVES. Not the way I understand it.

Senator COBURN. OK. All right. That is what I wanted to make sure.

The other thing is we had testimony by the IG. Why is it important to have a Census Director that spans Administrations?

Mr. GOLDENKOFF. Yes. What it comes down to is stewardship. The life cycle of a census spans the course of the decade, and several Presidential Administrations. To implement change, as you well know, can take years. And so what has happened in the run-up to the 2010 Census, there was a lot of turnover among the Census Directors. If you look back, since 1969 the average tenure is

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about 3 years for the Census Director. The longest tenure was 5 years.

Senator COBURN. Yes. So my question to Dr. Groves: Are we going to get to keep you?

Mr. GROVES. I do not believe I can answer that question.

Senator COBURN. Well, if you were invited, are we going to get to keep you?

Mr. GROVES. I do not know, Senator.

Senator COBURN. I am saying it somewhat in humor, but it is not humorous. Continuity in agencies like this is really important. When we get great leadership, we should do everything to keep that leadership and to make sure that continuity and the management plan that goes with it is carried out. My hope and my wish would be that you, in fact—I will work on my side to make sure you get asked. You work on your side with your wife to make sure you can. [Laughter.]

Senator CARPER. Just to follow up on Dr. Coburn's last comment there, Senator Brown and I hosted a hearing in this room a couple of weeks ago with folks from the Department of Defense, GAO, and a couple of other witnesses, and the thing we focused on was major weapon systems cost overruns, which have grown from $42 billion in 2000 to $402 billion last year, almost a ten-fold increase over 10 years.

One of the things that we have learned, as Senator Coburn and I earlier drilled down in this stuff, is that it turns out that the folks in the Department of Defense at the senior level in charge of overseeing acquisition, development and acquisition of these major weapons systems, have huge turnover, an extended period of time where there is basically at the Assistant Secretary level nobody there. A lot of the direct reports are not in position, and no wonder we are just chasing our tail and not doing a very good job at it.

So it is not just the census, but that is just—it is not uncommon, whether the President is George W. Bush or Barack Obama, to have something that looks like administrative Swiss cheese and Executive Branch Swiss cheese, and we have too many vacancies. One of the things that we have been working on—and Senator Schumer and Senator Alexander I think are providing good leadership here—is to reduce by about a third the number of positions that require confirmation. And we would love to not only do that, but also to be able to say that whoever is going to serve as our Census Director—and I hope it will be you—will serve for a 5-year term with the opportunity to go beyond that if there is interest in doing that.

All right. I want to go back to the questions that I was asking of Mr. Zinser and Mr. Goldenkoff. What I was asking is what you heard from Dr. Groves in his testimony that you are very pleased with, and I think what you are saying is that the three of you, the entities that you represent, appear to be on the same page, which is nice to hear. And I will come back to you say what were maybe one or two things that you did not hear that you would like to have heard. But, Mr. Goldenkoff, let me ask of you first, what did you hear that you especially liked? And maybe mention a thing or two that you think that you would like to have heard.

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Mr. GOLDENKOFF. Well, I think it is important to recognize that the Census Bureau sees that there are really two components to the challenges that they face going forward. The first component includes the need to refine and improve existing operations, in some cases develop new and innovative techniques, and bring on new technology, like the Internet.

The second component, of course, is the internal management piece, things like human capital management, their organizational structure, and from what Dr. Groves said, he is addressing that as well. So it is important that they combat the issue of a cost-effective census from these two perspectives.

What I would like to hear more about is a governance structure. The Census Bureau has a lot of tests; they have a lot of things in place, a lot of pieces of the puzzle. The big challenge going forward then is how is all this going to come together and how is it going to coalesce into a path to a more cost-effective census in 2020.

Senator CARPER. Mr. Zinser, anything that comes to mind that you did not hear that you would like to have?

Mr. ZINSER. Yes, I think the things that we have pointed out in some of our reports deal with those kinds of nuts and bolts that Robert just talked about: Better budgeting, better project management. For example, with the number of activities and operations that make up a census, they need integration in their budgeting and project management documentation.

I think risk management is an area where greater effort is called for. And I think if they can focus on those kinds of issues, eventually that will result in a more effective operation.

Senator CARPER. OK, thanks. And on page 3 of your written testimony, Mr. Zinser, you mention top management challenges for the 2020 Census, and I think you mention maybe seven of them.

Mr. ZINSER. Yes, sir.

Senator CARPER. Of those seven, just pick out one or two of what you think are the most critical challenges, and then I am going to ask Dr. Groves to comment on those, please.

Mr. ZINSER. I think the most critical challenge that we identify is addressing the issue of the use of administrative records to help supplement the enumeration process. It is an area where—

Senator CARPER. For example? Give us an example of that.

Mr. ZINSER. Well, there are numerous Federal agencies that collect information about U.S. households, whether it is the Veterans Administration or the Social Security Administration, and there is a lot of data out there that other agencies have collected that the Census Bureau actually does use for some of its mission.

I think that there are plans and exercises underway to try to figure out how to use that type of information, those administrative records, for the decennial. And I think if that type of information was used, we could reduce costs for many of the Census Bureau's operations.

Senator CARPER. OK. Would you comment on those points, Dr. Groves, please?

Mr. GROVES. On the administrative records, let me frame the issue. When we examine our non-response follow-up outcomes, one negative sign in the 2010 Census is that 22 percent of the people where we knocked on their doors in a follow-up act, we never

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reached. We did not have data from them. And then under our rules, we seek information from a building manager or neighbor to determine the count of people inside those houses.

Senator CARPER. Would you just pause for a second? Did you say 22 percent of the people that you tried to follow up with because you had not heard from them initially, 22 percent never provided—

Mr. GROVES. Right. And in—

Senator CARPER. What percent would that be overall?

Mr. GROVES. It is 22 percent of roughly 24 percent. So it ends up being a single-digit number in the—

Senator CARPER. About 4 or 5 percent?

Mr. GROVES. Yes, something like that.

Senator CARPER. So roughly we heard from 95 percent of the people in the country, households or residents, and roughly—

Mr. GROVES. Right, and that 22-percent figure should be compared in 2000 to 17 percent, so that is a move in the wrong direction.

Now, I have also received e-mails of people saying, "Why are you asking me these questions? Because I have given you the answers already." Now—

Senator CARPER. In other formats?

Mr. GROVES. Yes. They did not actually give them to us. They gave them to another Government agency. And they are right. And under our current procedures—under the old procedures we would not use those data in any way. So what the Inspector General is noting is that is a missed opportunity. We have people who would prefer us to use those data and not bother them again. But for a variety of reasons, we are not doing that. Some of them have to do with agreements with other agencies.

Now, as a statistician, I think our first obligation is to answer the question, Could we get good data? What kinds of people are covered that way? What kinds of people are not? And we know that the records are inadequate for some subpopulation, so you would not want to use it that way. That could harm the quality of the census. And we need to check how the attributes of people are reported there.

So you may recall, when I first testified in front of this Subcommittee after my confirmation, I noted that we added a test into the 2010 effort to see whether administrative records could cover the population. Well, we are in the middle of that test now, and that would be the first kind of technical answer. But I would hope Congress would talk about this because this is a change and we have to make sure everyone is comfortable with the change.

Senator CARPER. Good. Well, we are pretty good at talking about things. We will certainly talk about that, too. Senator Brown.

Senator BROWN. Thank you, Mr. Chairman.

Mr. Groves, the Commerce Department IG reported that the Census Bureau hired for the 2010 Census more than 140,000 temporary field employees who received training but worked 40 or fewer non-training production hours, costing the Bureau in excess of $80 million. What can be done in 2020 to avoid this waste of taxpayer money?

Mr. GROVES. Well, we went back and diagnosed some of that. First of all, the IG's figures I do not doubt. A lot of that occurred

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in the early operations. Let me tell you what happened. We actually underestimated the ability to recruit, hire, and train people that did a good job and stayed with us. We used production models from the 2000 cycle where the unemployment rate was much lower than it was in the 2010 cycle. We were able to hire people who really wanted the work. They put in a lot of hours. They were very good. They finished the work faster than we thought.

One of the problems is, looking forward, getting good estimates of productivity next time that takes into account what the labor market conditions are at the time. We undershot what the production actually was.

The second thing is sort of risk management on that. It is a very common tendency in production processes to make sure you produce on time, on schedule, and one way to reduce the risk as a manager is to overhire, and then you complete your test. We need to manage that process better, and we are talking about how to do that.

Senator BROWN. Well, I know you also had some inquiries for folks that actually were not doing it the right way, and I know you and I talked about that a little bit. You seem to be the—Friday night you get a call from somebody saying, "Hey, by the way, did you know that this census worker did A, B, C, or D?" On one occasion, I guess, brought his dog to work with him, then he was told not to, and, in fact, then got—

Senator CARPER. We actually have Senators who do that, don't we?

Senator BROWN. Yes. [Laughter.]

Senator CARPER. And they do not always behave well in the halls.

Senator BROWN. These do. Nice try.

Could you explain a little bit about those situations and how you handle them?

Mr. GROVES. Well, there were a lot of situations. When you have 600,000 people out on the street knocking on 47 million household doors, a lot of things happen. Some of them are wonderful things. Some of our enumerators actually saved lives because they knocked on a door where someone was in the middle of a heart attack and they—

Senator BROWN. Probably because you guys were coming, that is why they had the heart attack. [Laughter.]

Mr. GROVES. Others were bad things, so there were 700 incidents. About 35 percent of them against our enumerators, where people drew weapons on our enumerators. So it is a very complicated process. You have to watch it every day. We have wonderful people who jump on these incidents very quickly and manage them. We have pretty strict termination rules, so these are temporary employees—

Senator BROWN. How many did you actually terminate then?

Mr. GROVES. I actually do not know. I could get you this. I would be happy to do so. But there were a lot of terminations because there is not a lot of working with folk—

Senator BROWN. If you could let the Chairman and I know how many folks were terminated during this last census for inappro-

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priate behavior or just failure to do their jobs, that would be appreciated. You can just pick up the phone and call us.

Mr. GROVES. Sure, I would be happy to do that.

Senator BROWN. Do not reinvent the wheel. I do not want to do that.

Just to explore a little bit what Dr. Coburn said, if you are going to use the Internet like that, what are the fraud prevention mechanisms in place in something like that?

Mr. GROVES. Well, a lot has to do with IT security, encryption procedures—

Senator BROWN. I mean just on the individual. How do you know the individual is—forget the illegal/legal issue, but what if it is somebody just visiting out of the country?

Mr. GROVES. I think the key quality control procedures are similar on the Internet as they would be on paper. The same thing can happen on paper, and so we have reinterviewing procedures to double-check things. We have a lot of statistical techniques to look at outliers, data that do not look right, and we follow up on those cases.

Senator BROWN. What about the availability of private industry technology such as mapping and address database systems? It seems like this group that you all—not you per se but the Census Bureau actually reinvents the wheel every 10 years. Is there any way to kind of incorporate everything that other people have been doing for generations now?

Mr. GROVES. Well, on the mapping side, we are—

Senator BROWN. Computer generations I mean.

Mr. GROVES. Yes. All of these things we are pretty actively partnering in and reaching out to private industry. This is especially true on the mapping and geographical systems. We are doing a lot of work with a variety of companies. We are planning. Our great hope is to save the country money in about 2019 by continuously updating the address file, and we think that can be done with a lot of new partnerships. So if we can do that, you will see even more of that, hopefully.

Senator BROWN. Great. Well, I appreciate it. Mr. Chairman, I have to get to the next hearing.

Senator CARPER. You bet. I just want to say before you head for the next hearing, Dr. Coburn and I were here when the presentation was not as good and the news was not as good.

Senator COBURN. In the 1960s.

Senator CARPER. No, not in the 1960s. I think 6 years ago—not even that, 4 years ago. This is a lot better. I like to say if it is not perfect, make it better. We have room for improvement. What does Johnny Collins say about me? He says I am one of those people who believes in every pile of horse manure is a pony. [Laughter.]

That is one of many things he says about me.

All right. If I could, maybe a couple questions for Dr. Groves and then maybe one for Mr. Goldenkoff, maybe even one for Mr. Zinser, and then we will turn it over to our next panel.

Dr. Groves, what is the Census doing to ensure that its plans for an Internet response option will succeed in 2020 given our experience from 2010?

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Mr. GROVES. Well, we are doing a variety of things, and maybe the watch word on this is integration. I believe that the Internet operations we are using on other sample surveys are relevant to Internet usage in the 2020 decennial Census. We want to learn lessons from those.

Second, the tricky thing for us this decade will be to do enough testing of the Internet that will stay nimble on devices. So the devices that will access the Internet in 2020 will be multi-fold. Some of them have not been conceived of yet. We want a modern set of alternative tools, devices to access the Internet, because we think that is the way to achieve this higher convenience. So we need a lot of tests of Internet, little, small tests, in order to learn incrementally and to stay fresh. We cannot lock into device-specific solutions.

So the way we are avoiding that, we are spending a lot of time right now getting the base architecture straight. So these early years ought to get the infrastructure both technically and procedurally articulated, but allow the device-specific solutions to be unspecified at that time. Get the architecture right, then go forward, and at the last moment fix the device types.

Senator CARPER. All right. What are the risks that the Census anticipated for employing an Internet response option? And what actions are planned to mitigate these risks?

Mr. GROVES. Well, I have talked already about the IT security side, and the mitigation on that is actually the things we are going through now in production sample surveys. So I am pretty sure—I am confident that our IT security group is staying current with all of the threats that we have on IT systems, and they need to stay current, and they need to pay attention to our Internet tests on that.

I think the other unknown will be the reaction of the American public, especially groups that are traditionally hard to enumerate, to Internet options as the decade goes by. As broadband access disperses throughout the different income groups, we need to watch in order to predict carefully how they are adapting to Internet use. And so our studies have to be wise on that so that we can estimate the costs, which will be related to what proportion choose the Internet for the 2020.

Senator CARPER. Mr. Goldenkoff, we are going to come back and talk a little bit more in this question with you about the Internet. We see from Dr. Coburn's poster over here that—is this Canada?

Senator COBURN. England.

Senator CARPER. England. We see that in England they have been using the Internet, and as it turns out, I do not think they are the only country that has been using it. Some have done so with some success. Others have done so with failure.

First of all, I do not know if you can mention a couple of countries that you think might be pretty good role models for us to look at and see what they are doing right, maybe a couple to look at to see what they did wrong. But how do we engage the assistance of other countries that have succeeded—my question here says how do we engage other counties, but I think it is how do we engage other countries to see where they have succeeded and where they have failed. The National Governors Association (NGA) has some-

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thing called the Center for Best Practices, and it is an opportunity for Governors from States across the country to share what is working and to help other States that would like to learn from them.

I do not know that we have a Center for Best Practices for nations like ours that want to learn how to do a census, conduct a census every 10 years and do it more accurately and most cost effectively, but it would be nice if we had something like that. So point us in the right direction. How do we engage the assistance of other countries that have done well doing this and have not done well?

Mr. GOLDENKOFF. On the Internet alone or—

Senator CARPER. Yes.

Mr. GOLDENKOFF [continuing]. Just a general census?

Senator CARPER. No. Internet.

Mr. GOLDENKOFF. Well, Canada has been using the Internet, some other countries as well. I believe Brazil has used the Internet. I guess the Census Bureau—I do not want to speak for it, but are there liaisons or folks who liaison with other countries?

Senator CARPER. Go ahead, Dr. Groves. Feel free.

Mr. GROVES. Robert is right. We have an ongoing interchange with Statistics Canada that has actually been quite aggressive. We may have people up there right now. They are preparing for theirs. And we have gone back and forth.

Brazil was a very interesting census this last year because they used hand-held devices for the entire country, so we sent a delegation down there. We are watching the U.K. It turns out that there is a small family of census people around the world who keep in touch.

Senator CARPER. Isn't that nice.

Mr. GROVES. They are nice people. [Laughter.]

Senator CARPER. All right. Well, that is good to hear. That is good to hear.

Maybe one for Mr. Zinser. The Census Bureau has a variety of ongoing evaluations in place to measure the overall effectiveness of the 2010 design. What steps should it take to ensure its researching and testing results drive decisions for future decennial operations?

Mr. ZINSER. Well, I think the evaluations that they have underway right now are the best opportunity we have to know whether or not the census was of quality. If you ask the question right now—was the census a success—I do not think you can actually answer that until you get the results of their evaluations.

I think Robert is right that the operations were a success and that the counts were delivered on time. But in terms of the overall quality of the census data, I think we need to wait for those evaluations, and then that will inform you in terms of how good the census actually was.

Senator CARPER. OK. All right. And, Dr. Groves, back to you for another one, if I could. I think there has been some mention here that the Census is looking, I think it was said, at six different design options for the 2020 Census. Give us some idea when the Census will decide on a final design and what criteria will it use to make its final decision?

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Mr. GROVES. We anticipate that late 2015 into the 2016 period we would have enough of the findings that the outlines of the design could be articulated. We are looking at right now six different alternatives, and I will not go through all of them, but they vary on how we keep up—how the address list works, how we keep it up; how we enumerate people, different modes at different sequences; and then how we organize the management of the census, how decentralized it is—remember, we had about 500 different local census offices this time—versus how centralized could it be. And that will determine infrastructure costs.

So we are looking at all three of those dimensions, and we are narrowing things as each month goes by. As we get research findings, we will be able to drop options, and we would love to keep you up to date with our progress on that and tell you our decision process and our recommendations.

Senator CARPER. All right. Good. Thank you.

The last question is a question I ask panelists but on a wide range of issues, and that is, what should we be doing in this branch of government, the Legislative Branch of Government, to help make sure—in this case, how do we make sure that we get a more accurate census 9 years down the road and we get it in a more cost-effective way, better results, less money? And we are going to introduce legislation that is very similar to what Senator Coburn and I introduced last year that passed unanimously in the Senate. We are going to introduce legislation probably—when would you say? Tomorrow afternoon? Tomorrow morning? Maybe not that soon. But we would like to have your advice on what ought to be in there, and maybe what ought not to be in there. We would welcome that. I would ask you to give us that for the record. Folks on our Subcommittee have 2 weeks to submit questions, and if you would just respond promptly, we would be grateful. But one of the questions we will be submitting in writing is as we go forward with this legislative process, look at the legislation we offered last time, what is good about it, what should be changed, maybe what should be dropped, and we would appreciate your constructive criticism.

And my sense, Dr. Groves, is that you are warming to your job, and it sounds like you have a good team around you. A friend of mine is a basketball coach. He has been coaching high school basketball in Delaware for about 25 years. I ran into him a couple months ago at the Special Olympics basketball tournament, which is hosted by the University of Delaware. It was a great day, a great weekend. And I walked into the Bob Carpenter Center there at the University of Delaware where the basketball tournament was going to take place. And while walking in with my basketball coach friend, we were talking about the lessons that we learned for life from athletic competition, all kinds of lessons we learned by virtue of playing sports. And he talked to me—I mention this as kind of timely coming right at the end of March Madness, but he said, "In basketball the best players are not just the ones who shoot the best. They are not necessarily the ones who rebound best or dribble best or pass best." He said, "The best basketball players are the ones who make everybody else on the team better."

Think about that. The best basketball players are those who make everybody else on the team better.

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Part of what GAO does and what our IGs are doing is trying to make sure that everybody on the team that you lead is better. And I think we are seeing improvement. Clearly we need to see more, but I am encouraged by the direction that we are taking.

We thank each of you, one, for your leadership and, two, for your persistence in this goal to get better results for less money. Thank you.

With that, we will dismiss this panel and invite the second panel forward. Thank you so much.

Gentlemen, welcome. Good to see you.

Dr. Thomas Cook, right now the State of Delaware, Governor Jack Markell, has a secretary of finance, and guess what his name is?

Dr. COOK. Tom Cook.

Senator CARPER. Thomas Cook. We call him "Tommy."

Nice to see you, Mr. Castro. We have one doctor, and should I call you Dr. Castro or is it just Mr. Castro?

Mr. CASTRO. Mister.

Senator CARPER. OK. And how about Mr. Vargas? Is it mister?

Mr. VARGAS. Mister.

Senator CARPER. OK. So it is. Two misters and a doctor. All right. I am going to just give a short introduction for each of you. We are happy that you are here. We appreciate your presence and your testimony before us.

Daniel Castro is a Senior Analyst with the Information Technology and Innovation Foundation, specializing in information technology policy. His research interests include health IT—that is one of mine, too—data privacy, e-commerce, e-government, electronic voting, information security and accessibility. He has experience in the private, nonprofit, and government sectors. Before joining the Information Technology and Innovation Foundation, Mr. Castro worked as an IT analyst at GAO—is that right?

Mr. CASTRO. That is right.

Senator CARPER. All right—where he audited IT security and management controls at various government agencies. He has a bachelor's degree in foreign service from Georgetown University and a master's degree in information security technology and management from Carnegie Mellon University, two very fine universities.

Dr. Cook, Thomas M. Cook, is co-chair of the National Research Council's Panel to Review the 2010 Census. He was elected to the National Academy of Engineering in 1995 for leadership in advancing operations research within the transportation industry, and he has served as President of the Institute of Management Sciences and the Institute for Operations Research and the Management Sciences (INFORMS). Pretty clever. He holds a master's degree in business administration from Southern Methodist University—does that make you a mustang?

Dr. COOK. It does, yes.

Senator CARPER. Yes, a mustang—and a Ph.D. in operations research from the University of Texas. A longhorn, indeed. Hook 'em, horns.

Finally, Mr. Vargas, Arturo Vargas, is the Executive Director of the National Association of Latino Elected and Appointed Officials,

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a national membership organization of Latino policymakers and their supporters. Prior to joining the National Association of Latino Elected and Appointed Officials, Mr. Vargas was Vice President for community education and public policy at the Mexican American Legal Defense and Education Fund, where he supervised and directed the organization's community education and leadership development programs. Mr. Vargas is nationally recognized as an expert in Latino demographic trends, electoral participation, voting rights, the census, and redistricting. That is a pretty good portfolio.

All right, gentlemen. We are glad you are here. We appreciate your preparation for today's hearing, and your entire statements will be made part of the record. If you would like to summarize, that would be fine. If you go over 5 minutes, that is all right. If you go way over 5 minutes, that is not all right, so I will rein you back in. But why don't you lead us off, Mr. Castro. Again, welcome. Thank you.

**STATEMENT OF DANIEL CASTRO,[1] SENIOR ANALYST, INFORMATION TECHNOLOGY AND INNOVATION FOUNDATION**

Mr. CASTRO. Thank you. Mr. Chairman, I commend you for exploring ways to use information technology to improve the census. As we heard today, the 2010 Census cost approximately $13 billion, more than any census before it, and in my view did not use IT efficiently or cost-effectively. This afternoon I would like to discuss a few specific recommendations for how the Census Bureau can better use IT in 2020.

First, Congress should require the Census Bureau to allow individuals to submit their census form online. Worldwide, more than 30 countries are providing or experimenting with an Internet response option for their census, including Canada, Singapore, Norway, and Australia. Allowing individuals to submit their form online would increase convenience, accessibility, and usability for citizens and improve accuracy, reduce costs, and increase security for the Census Bureau.

For citizens, online forms can be made more user friendly than a paper form by providing contextual help and multilingual support.

Some people with disabilities find an online form is easier to complete and return than a paper form because of the accessibility features available on computers, such as large text and screen readers.

Collecting data online can also improve data accuracy over paper-based methods by better handling atypical responses, using automated error checking, and eliminating the errors that can occur during the scanning, decoding, and transcribing process.

And perhaps most importantly, of course, using the Internet to collect census data can help reduce the cost of data collection by reducing the mailback costs, processing costs, and then the follow-up cost.

In addition to allowing individuals to submit their census form line, the Census Bureau should incorporate current technology

[1] The prepared statement of Mr. Castro appears in the appendix on page 103.

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trends into its planning and operations. I want to briefly discuss three trends.

First, cloud computing. Cloud computing is a term that refers to the practice of selling information technology as a service. Essentially, cloud computing allows organizations to rent computing power on an as-needed basis. An organization can scale up or down its IT usage according to demand. Organizations benefit from the flexibility that cloud computing offers them as they do not have to make long-term commitments or have fixed costs. Government agencies, for example, can better align cost with output by only paying for their actual use of IT rather than having to overbuild capacity based on potential demand.

The concepts behind cloud computing—on-demand, scalable, and pay-per-use—make it ideal for applications such as the census, which have variable demand for resources. The computing resources needed by the Census Bureau peaked sharply during the rather short period of time when individuals and census workers are submitting responses but go unused at other times. This means that if the Census Bureau or its contractor use cloud computing, they would not need to invest in a large amount of IT infrastructure but could instead only pay for the actual resources used, and this can, of course, help eliminate government waste.

The second technology trend that the Census Bureau should take into account is the proliferation of low-cost, high-performance mobile devices, such as smart phones and tablet PCs that access the Internet. Using a mobile device for data collection and address canvassing can allow census workers to enter data more accurately and efficiently. Rather than developing proprietary and expensive hand-held devices, as the Bureau chose to do in 2010, in the future it should use low-cost, off-the-shelf equipment, similar to what Brazil did.

By developing platform-neutral mobile apps that run in the cloud, the Census Bureau can build data collection tools for census workers that will work on tomorrow's mobile devices. In addition, if the Census Bureau uses off-the-shelf products in 2020—for example, a consumer-grade tablet PC—it could then donate these computers to low-income schools after the census is complete.

Third, the Census Bureau should more actively engage with individuals who use social networks and mobile devices, which is an increasingly large share of the U.S. population. This can help achieve higher response rates and reduce the need for non-response follow-up, one of the most costly aspects of the census.

In 2020, individuals will increasingly access the Internet on mobile devices. Therefore, the Census Bureau should be sure to incorporate tools to make it easier for individuals to complete the census using these devices. For example, technology like QR codes, which are kind of matrix barcodes, could give individuals the ability to point the camera of a smart phone at the census form and automatically be directed to their personal census form online.

In short, the Census Bureau should use IT in the 2020 Census to not only improve existing operations but to find innovative ways to use technology to deliver more value to citizens. For example, the Census Bureau or even Congress may eventually decide that collecting data every decade no longer makes sense in a world that

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demands real-time intelligence, and instead turn to population registers or other sources for this information. Given the rising cost of conducting the decennial Census, the Census Bureau should welcome the opportunity to use IT to reduce costs and improve quality. Certainly, technology is not a panacea, but it can help organizations like the Census Bureau achieve their mission more efficiently and effectively. Thank you.

Senator CARPER. Thanks. That was really good. That was one of the best explanations of cloud computing that I have heard.

Mr. CASTRO. Thank you.

Senator CARPER. And even I could understand that, so that is good.

Dr. Cook, please proceed.

**STATEMENT OF THOMAS M. COOK,[1] PH.D., CO–CHAIR, NATIONAL RESEARCH COUNCIL PANEL TO REVIEW THE 2010 CENSUS**

Dr. COOK. Mr. Chairman, thank you for asking me to testify before you today. I am Tom Cook, co-chair of the National Research Council's Panel to Review the 2010 Census. As such, I am pleased to be able to summarize the panel's recently released interim report, *"Change in the 2020 Census: Not Whether But How."*

I also speak in the capacity in which I accepted the panel chairmanship in 2009—as an experienced systems engineer viewing the challenges of the decennial Census from anew. I trust that you understand that I speak on the panel's behalf and the National Academies' behalf when commenting on the panel's interim report, but that, particularly when answering any questions you may have, my opinions are strictly my own and should not be construed as formal guidance from the panel or the Academies.

The Panel to Review the 2010 Census is charged to provide an independent evaluation of the 2010 Census with an eye toward suggesting research and development for a more cost-effective 2020 Census. In support of that work, the panel held five public meetings during the first year of operation, but many of our panel's impressions were formed through the extensive series of 58 site visits conducted during 2010 to local offices, regional census centers, data capture sites, and other census support facilities.

Our panel is not yet in a position to provide a thorough evaluation of the 2010 Census; much remains to be learned from the Bureau's Census Coverage Measurement program and its procedural evaluations. But I think it is safe to note some broad outlines as a prelude to 2020 planning. Through our site visits, we were uniformly impressed by the dedication of the local and regional census staff—a workforce of exceptionally high quality. Yet the great paradox of the 2010 Census is that this high-quality workforce was made to execute plans and procedures that largely follow the scripts of the 1970 census. Moreover, in several key respects—including the failed attempt to fully develop the handheld computers, and the 2006 decision not to permit Internet response—the 2010 Census was arguably more hindered than enabled by technology.

[1] The prepared statement of Dr. Cook appears in the appendix on page 117.

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From our 18 months of work, I think that the panel is convinced that it is possible to make the 2020 Census much more efficient and cost-effective than its predecessors. However, the central premise of the report is that these significant efficiencies are possible if, and only if, there is a major transformation from the 40-year-old, paper-driven processes to processes that are facilitated using today's technology. Successfully executing that major transformation will require:

One, a senior management commitment to change that is publicly announced early in the process and continuously communicated throughout that transformation process;

Two, continued and frequent involvement and oversight in the planning process from senior management representing key departments, including the field organization, not just headquarters;

Three, adequate early investment in the research and planning phases of the transformation process;

And, finally, external help for all phases of the transformation process from research and planning through development, testing, and implementation. I think this last point is really important.

In the report, the panel's core recommendations are attitudinal in nature. We suggest that the Census Bureau needs to put some stakes in the ground that should not be subject to debate, once agreed upon. As our "Not Whether But How" subtitle suggests, we think the Census Bureau should explore possible changes as real, viable options but not as purely hypothetical ideas. As has been observed in the past, increased use of administrative records data has been thought of as the "next big thing" for the next census, for at least the past three decennials. Until the question changes from simply whether a change could be made to precisely how and to what degree a change could be made, promising innovations will remain as merely hypothetical.

In our report, we explicitly recommend that the Census Bureau set clear and publicly announced goals. We argue that the Bureau should commit to significantly reducing, not just containing, the per housing unit cost of the census, while limiting the extent of census error. Our experience with successful reengineering projects like the one we are anticipating in both the public and private sector is that setting bold goals is essential to underscore the need and the importance of that reengineering—again, to avoid it being a purely hypothetical exercise.

The panel report identifies four high-priority topic areas for research and development for 2020 planning:

First, the application of operations engineering to census field data collection operations;

Second, emphasizing multiple modes of response to the census, including response via the Internet;

Third, the use of administrative records-based information to supplement a variety of operations;

And, fourth, the continuous improvement and updating of the Bureau's geographic resources.

A point to emphasize is that the Census Bureau should not reinvent the wheel but should build on the work from external experiences. It should learn from other countries, like we discussed ear-

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lier. We spent a lot of time in Canada, at least we spent a couple days in Canada—not a lot of time but a couple of days in Canada.

Senator CARPER. Did it seem like a lot of time?

Dr. COOK. Yes, it seemed like a lot of time. But it was very good time spent because they made huge progress with the Internet, but not only with the Internet but with the field automation as well.

Senator CARPER. Those Canadians are clever, aren't they?

Dr. COOK. Yes, and we can learn a lot from them.

Senator CARPER. Yes.

Dr. COOK. The use of administrative records is an area where "not whether but how" is particularly salient. As our report states, the idea of records as a wholesale substitution for the census is no longer the most interesting question, if it ever was. What is interesting or important to study is the extent to which records might be used throughout the census process—for updating the address list and inventories of group quarters facilities, a substitute to asking neighbors or landlords in "last resort" or proxy enumeration or, more critically, for possible cost reduction—as a possible supplement to non-response follow-up.

To be sure, there are thorny legal and practical issues that must be worked through regarding the use of records, but the existence of those challenges should not stymie active exploration of the cost-quality trade-offs involved in using them.

Thank you again for the opportunity to testify. I think I am out of time.

Senator CARPER. Your time has expired. All right. Thanks so much, Dr. Cook, for that testimony.

Mr. Vargas, please proceed.

**STATEMENT OF ARTURO VARGAS,[1] EXECUTIVE DIRECTOR, NATIONAL ASSOCIATION OF LATINO ELECTED AND APPOINTED OFFICIALS (NALEO) EDUCATIONAL FUND**

Mr. VARGAS. Good afternoon, Chairman Carper. Thank you for the opportunity to appear before you again today—

Senator CARPER. It is our pleasure.

Mr. VARGAS. —on behalf of the NALEO Educational Fund, this time to discuss the results of the 2010 Census and planning for 2020.

We are one of the leading organizations in census policy development and public education. In 2010, we led the largest and most comprehensive privately funded census outreach program targeting the Nation's more than 50 million Latinos. This effort included the participation of thousands of elected officials, community leaders, national and local organizations, schools, churches, businesses, and a partnership with the Spanish language media companies Univision, ImpreMedia, and Entravision.

We believe the 2010 Census was generally a success in counting every single person living in the United States on April 1, 2010, as is constitutionally required, and we commend the Bureau for its undertaking. However, we believe that there was not a full count of the Latino population because of significant barriers, many of

[1] The prepared statement of Mr. Vargas appears in the appendix on page 120.

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which are relevant to Census 2020. So we offer recommendations that we hope the Census Bureau will take into account.

First, as has been previously discussed, we support the independence of the Census Bureau Directorship, making it a 5-year appointment, not coterminous with the Presidential Administration, and we will support provisions of law that you will introduce on that.

There were several improvements in the 2010 Census questionnaire. The Bureau redesigned the format and wording of the questionnaire on race and Hispanic origin to obtain more accurate responses. However, confusion regarding the differences between the race and Hispanic origin questions persist. We encourage the Bureau to continue testing these questions to secure better data.

The Bureau mailed out bilingual English and Spanish language forms directly to certain households for the first time. The Bureau's own analysis shows this strategy led to higher mail response rates and, thus, cost savings. However, we experienced difficulties in obtaining information about the dissemination of these questionnaires. We urge the Bureau to consider how to make the information on distribution of bilingual questionnaires more useful to its partners and examine data in large centers of Latino population to determine where to distribute the bilingual form in the future.

We applaud the Bureau for disseminating regular information on response rates. The Bureau provided this information in real time on its Web site, which is critical for local outreach efforts. However, we note that the Bureau's Spanish language Web site was not as comprehensive as it was in English.

The Bureau and its outreach partners experienced significant challenges in Texas' colonia areas. Much of this was as a result of miscommunication between the Census Bureau personnel and the local community. In essence, the local community was not adequately informed by the Bureau of the strategies that the Bureau would use to count in the colonias, that they would not be receiving the form in the mail. This resulted in extreme confusion and mistrust of the Census, and as a result, local leaders lack such confidence in the 2020 Census that they are challenging the count.

Senator CARPER. Say that again? 2020?

Mr. VARGAS. 2010. I am sorry.

Senator CARPER. Good. Thank you.

Mr. VARGAS. We commend the Census Bureau for seeking the input of stakeholders such as ourselves and acting on several of our recommendations with regard to its media plan. However, despite our urging, the Bureau did not implement a significant communication strategy targeting native English-language-speaking Latinos. The Bureau and its contractors failed to recognize that a communications strategy aimed only at Spanish-dominant Latinos will not reach all of the Latino population. The Bureau needs to have a dual strategy of reaching both English-language-dominant and Spanish-dominant Latinos.

We believe in a robust Partnership Program in making the census a success, and there were numerous cases where the vitality of local partnerships played a role in the success of initial local outreach. We recommend that the partnership specialists continue their efforts throughout NRFU operations. Many partner organiza-

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tions had otherwise no avenues of contact with the Bureau when the mail-it-out/mail-it-back process ended. The Bureau should enhance its Partnership Program and make it an ongoing component of its outreach efforts on all census activities and between decennials.

Now, with regard to promoting trust in confidentiality, we recommend that the Federal Government establish an interagency task force to educate all Federal agencies about the importance of promoting the Census 2020 and provide guidance on activities that promote public trust in the confidentiality of the census. The task force should develop best practices for State and local governments so that the public receives a consistent message regarding confidentiality.

Before the census began, there was significant doubt among many whether the PATRIOT Act superseded other Federal law guaranteeing privacy in the census. The Department of Justice issued a letter only a month before Census Day stating that the PATRIOT Act did not override Title 13 of the U.S. Code. If the PATRIOT Act is renewed by the Congress, the Department of Justice should reissue a statement regarding the supremacy of census confidentiality well in advance of 2020, and the Bureau should actively publicize this fact.

We also found a need for better communication and coordination between the Bureau's national office and regional and local operations. At times national policies were not communicated effectively to local offices, and national headquarters was not aware of problems in the field. There were often inconsistent interpretation and implementation of practices between local offices.

We believe that the Census Bureau's Advisory Committees played an important role in guiding and monitoring critical census policies for 2010 and other census operations. The charter of the Decennial Advisory Committee has expired, and we appreciate Director Groves' having worked with the committee to solicit recommendations for future advisory committees. We urge the Bureau to implement the recommendations so that a new advisory committee can provide input in the earliest stages of Census 2020 planning, including such discussions that we are having today about Internet responses.

Finally, the Congress is considering a continuing resolution (CR) for fiscal year 2011. The House-passed version of the continuing resolution would appropriate 15 percent less than the President's request. This proposed funding would have a detrimental impact on several important census activities, including planning for 2020. We urge the Senate to reject the House-passed version of the CR and to ensure that the Census Bureau has the resources needed to conduct the ACS and Census 2020 planning in a cost-effective manner.

Thank you, sir, for the opportunity to testify before you.

Senator CARPER. Good. Thank you so much.

I am going to come right back to you, Mr. Vargas, if I could, and I will ask each of you the same question, just a very brief question, and I would just ask for a very brief response. Then we will come back and follow up.

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Mr. Vargas, do you think with respect to the census it is realistic for us to try to achieve in 2020 a better result, maybe a more accurate result for less money?

Mr. VARGAS. Oh, absolutely, and I think some of the strategies we are discussing here about Internet responses are an important topic. However—

Senator CARPER. You can just stop right there. I will come back. We will come back.

Mr. VARGAS. OK.

Senator CARPER. Same question, Dr. Cook.

Dr. COOK. Absolutely, but I think that you should guard against overly conservative budgets. You should have a bold budget, an aggressive budget.

Senator CARPER. OK. Thank you. Mr. Castro.

Mr. CASTRO. Yes.

Senator CARPER. That was pretty short. Good. Right to the point.

All right. Mr. Vargas, you are sitting on that side of the table. If you were sitting on this side of the table, what would you be doing as a member of the Legislative Branch to try to ensure that in 2020 we actually achieve a better result, a more accurate result for less money? So if you were sitting over here, if you were Senator Vargas, the Honorable Vargas.

Mr. VARGAS. The Honorable Vargas, not Hon. Vargas. [Laughter.]

What I would do is set up certain milestones for the Census Bureau to reach between now and 2015 when the Bureau decides on the design of the 2020 Census.

The one thing I was going to say with regard to Internet responses or any new way of taking the census, what we need to ensure is that we have the cooperation of the public. And however the census is conducted, it must be done in a way that the public actually trusts the confidentiality of the census.

Senator CARPER. OK. Thank you.

Dr. Cook. Senator Cook. We actually had a Senator Cook for many years, the mother of secretary of finance Tom Cook.

Dr. COOK. What I would do is make sure that immediately "or very soon" you get a third-party, objective opinion, and maybe another one, of what the planning process is all about. That is one thing.

The second thing is I would make sure that the planning process is adequately funded. That is where the cost will be driven, by the quality of that process.

Senator CARPER. All right. Thank you.

Dr. COOK. And I would again suggest that it is a major overhaul, it is a blank-sheet-of-paper approach.

Senator CARPER. All right. Thank you, sir. Mr. Castro.

Mr. CASTRO. I think the biggest challenge that I see in 2020—which would be a repeat of 2010 and 2000—is that the Census Bureau and many Government organizations are very risk averse to applying new technology and to have innovation, to have—

Senator CARPER. Why do you suppose that is?

Mr. CASTRO. Well, because they are judged mainly on performance, not cost savings, and Dr. Groves alluded to this when he talked about overstaffing and personnel. People overstaff on tech-

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nology as well. They use—but they know they will not get in trouble for—not what is innovative and new and exciting, and that is a real risk.

Senator CARPER. That is a great point. All right.

Mr. Vargas, back to you. A similar kind of question, but instead of having you put on a Senator hat and sitting on this side of the dais, put your hat on where Dr. Groves was sitting and you are the person who is the Director of the Census Bureau. What would you be focusing on to make sure we get better results for less money?

Mr. VARGAS. Two things. One is I would continue to promote the Partnership Program so that the relationships that the Bureau established with community organizations and with community leaders are sustained as he suggested in his written testimony, so that come 2018, 2019, we are not investing large amounts of money to promote Census 2020.

Number two, I would also make sure that I work with the Congress to ensure that every household has access to the Internet and to broadband. There is a disparity right now between African American and Latino households and white and Asian households in terms of access to the Internet.

Now, responding to the census via the Internet would be terrific if you have the kind of capacity and accessibility that everyone else has.

Senator CARPER. Give us some idea what the difference is between Internet access between families, say, of different ethnic origin.

Mr. VARGAS. Well, certainly it is a cost factor.

Senator CARPER. No. I am looking for percentages, like 50 percent, 60 percent, 70 percent. Do you know that? Do you have any idea?

Mr. VARGAS. I do not know off the top of my head.

Senator CARPER. We will just ask you to respond for the record.

Mr. VARGAS. I would be happy to.

Senator CARPER. OK. Thanks.

INFORMATION FOR THE RECORD

According to the National Telecommunications and Information Administration (NTIA), 68.8 percent of Asian, 68.3 percent of White non-Hispanic, 49.9 percent of Black, 46.1 percent of Native American and American Indian, and 45.2 percent of Hispanic households use broadband in the home.[1]

Senator CARPER. Dr. Cook, same question, please.

Dr. COOK. If I were Dr. Groves, I would immerse myself in this planning process and make it the number one priority for the next several years.

Number two, I would try to get some external help because I do not think all the resources required exist at the Census Bureau.

And number three, I would make sure we had adequate funding for that planning process.

Senator CARPER. All right. Thank you. You are on message. In my business we say that if you repeat the same thing over and over again, you are on message. That is good. Mr. Castro.

[1] Gomez, Anna. June 23, 2011. http://www.naleo.org/2011—Images/Anna%20Gomez%20Broadband%20Session.pdf (accessed August 15, 2011).

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Mr. CASTRO. I would look to using technologies, specifically the Internet and mobile devices, for the communications side. We talked about the cost, 42 cents to send out a mail piece. It is a fraction of a cent to send out an e-mail or online notice on Facebook. In 10 years everyone is online, even the distributions with different demographics based on race. It is much higher when you talk about mobile phones and how different demographics use mobile phones for Internet access. It is very easy to communicate, and it is a lot cheaper. You might not get 100, but if you can do 90 percent at a fraction of a cent, that is a lot cheaper than 42 cents.

Senator CARPER. Good. Dr. Cook.

Dr. COOK. One other thought. If I were Dr. Groves, I would—

Senator CARPER. You would get rid of that tie, wouldn't you?

Dr. COOK. Yes, first of all. But I would put some stakes in the ground. I would say we are going to do the Internet, we are going to automate the field, and we are going to look at other census bureaus for best practices.

Senator CARPER. All right. Good. Thanks.

Let me just ask maybe a couple of follow-up questions, and then we will call it an afternoon. I have to go over and start voting in a little bit.

Let me come back, if I could, Mr. Vargas, to you for this next question. Much of the success of the 2010 decennial can be attributed to partnerships—you have alluded to that—with community-based organizations. Could you just describe for us the value of the Partnership Program and assess for us, if you will, its overall effectiveness in ensuring fuller participation of hard-to-count groups? And what should the Census Bureau be doing in 2020, between now and 2020, to keep stakeholders better informed?

Mr. VARGAS. Well, the value of the Partnership Program is that you have a staff of outreach workers who are developing relationships with trusted messengers in local communities. Individuals like myself who are willing to stand up and tell the people who believe me, telling them to believe the Census Bureau when they say that the census is safe and confidential. So the Partnership Program is absolutely key in that.

But another thing that also worked extremely well in both 2000 and 2010 was the paid advertising campaign, and that is something that I think the Bureau needs to continue investment in.

What was important about the role of nonprofits organizations, though, this time around is that there were very little resources provided by State or local governments as there were in 2000—or in 2010 for organizations such as my own.

Senator CARPER. Say that again? There was less?

Mr. VARGAS. There was less. For example, California in 2000 spent $24 million to promote the census within California.

Senator CARPER. In what year?

Mr. VARGAS. 2000. And in 2010, the amount was less than $1 million.

Senator CARPER. Did it have anything to do with their financial situation?

Mr. VARGAS. It had everything to do with the recession, which is why the role of private foundations was so important. So I would also encourage the Bureau to maintain relationships with those

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foundations so that they are primed to be able to fund independent efforts come 2018 and 2019.

Senator CARPER. OK. Good. Thank you.

One for Dr. Cook and for Mr. Castro. In your statements, I believe you mentioned that other countries have used—in fact, I think each of you mentioned other countries have used the Internet to collect census data, and we have heard that from others, Senators as well as witnesses. But what has their experience been like, to the extent you can comment on it? Do you have any estimates of the range of the savings, the magnitude of the savings that could be expected, reasonably expected by using the Internet? What steps should the Bureau take to minimize security risks? Three parts.

Dr. COOK. As I said, we spent some time in Canada, and they did not go on the Internet for an initial response because of a cost-savings motivation. It was mostly because they basically thought it was the right thing to do. They did not know what the cost consequences would be before they went. They found that—well, what they say is a 30-percent take-up rate is their breakeven; if they get more than 30 percent, they start making lots of money on the Internet. But another interesting thing they found was that the quality of the response was significantly better on the Internet, and, therefore, they did not have to redo them.

When they calculated the cost savings of the Internet, I am not sure they captured all the cost savings because some of those savings are probably hidden. For example, if you are on the Internet, you have real-time information of who has responded and who has not, which would avoid the necessity of somebody knocking on the door two or three times.

The same thing is true with the field operations being automated. If that information is real-time and you can say do not go to that next house because we just received an Internet form, those things, that real-time response, I do not think they have even tried to measure the cost-effectiveness of that.

Senator CARPER. Yes, that is a good point.

Dr. COOK. I think that is a big one.

Senator CARPER. That is a good point.

Mr. Castro, do you want to take a shot at those couple questions? Do you want me to repeat them or are you okay?

Mr. CASTRO. I think I have them.

Senator CARPER. All right. Good.

Mr. CASTRO. I will focus on what we can learn from other countries. In Canada, I think what was really interesting in 2011 this year, as they prepare to conduct their census, is that they are not spending a lot of money to rebuild their program. They are using what they did in 2006 with a small upgrade. That is a huge savings right there. Once you do it once, you do not have to keep doing it again and again. And as we see, once you do it for ACS or another survey program, you do not have to reinvent the wheel every time.

The second big savings that I think we can see in a country like Singapore, what they have done is they have promoted the Internet response option as a cost-saving measure. So what that means is first you are given a mailing that says do it online; then you maybe are given another mailing saying do it online. Then you are given

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the option to do it by telephone in an automated manner, then through mail, and then through—so you get to the most expensive ways last, and that is another way of really driving costs in the right direction.

Senator CARPER. All right. Good. Maybe one more, if I could, for you, Mr. Castro. You spoke in your testimony about cloud computing, but I want to come back and focus on it just a little bit more. But help us understand how the census can use cloud computing. And what specific applications do you see, since this is contracting for—you mentioned the needs for the technology, for the computer technologies, goes up and down. It is variable over the life of the census. And the Census Bureau would seem to be kind of an ideal candidate for this sort of thing. But just help us a little bit understand better how the census can use cloud computing. What specific applications do you see the census contracting for?

Mr. CASTRO. Sure. So I guess in 2007, I did a model looking at the numbers that we had for the 2010 Census to look at the cost savings that were there, and one of the challenges that the Census Bureau cited at the time, the reason that they said an Internet response option might not have cost savings, is because it is so difficult for them to predict the response. So one of the great things about using cloud computing is you do not have to know this kind of intelligence ahead of time about what the actual response will be online. You do not need to know if everyone will go at 6:00 p.m. when they get home the day the forms arrive or if they take 2 weeks to respond. You can just buy the capacity and buy the bandwidth and the server space and the processing power, and you will pay a fixed cost for that. It does not matter how much you use or when you use it because there is that much capacity available. And it is really important, I think, when we are talking about this that we talk about the option. There are different types of cloud computing. There are public clouds and there are private clouds. Right now most governments have been operating on the private cloud, which is basically spending a lot of the money and sharing it among government people. So, you are sharing resources within government. It is a lot cheaper when you share resources among everyone, including private companies and, public cloud offerings. So I think it is very important, when we look at cloud computing and how the Census Bureau can use it to drive savings, that public clouds are definitely on the table.

Senator CARPER. Thank you very much.

Sometimes I like to at the end of a hearing just ask you all if you would like to—I will not ask you to give the benediction, but I would like for you just to share with us a closing thought or two. And then I will offer a thought or two, and we will call it a day.

Mr. Vargas, do you want to lead us in the benediction? Any closing thought? Maybe something that just pops up given the discussion we had with this panel, maybe looking back at the earlier panel, or just something that has been triggered by virtue of this conversation.

Mr. VARGAS. I guess my final thought would be that I would express my appreciation to Director Groves, who stepped into a role that I do not think many people would have really been delighted to do, but he did so in an admirable fashion, and I think his leader-

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ship was critical at the time to make sure that this census was executed as well as it was, given everything that he inherited.

And I would also express appreciation to the thousands and thousands and thousands of Americans across the country who partnered with the Census Bureau to pull it off.

Senator CARPER. Thanks. Dr. Cook.

Dr. COOK. I guess my one thought is that the leadership of the Census Bureau ought to make the design of the 2020 Census the number one priority now.

Senator CARPER. Really?

Dr. COOK. Yes.

Senator CARPER. OK. Thanks.

Mr. Castro, any closing thought?

Mr. CASTRO. I will be a little more specific on mine. I think it is interesting that the census, part of the Commerce Department, the Commerce Department is releasing a National Strategy for Trusted Identities in Cyberspace on Friday, and that is something that was not mentioned today, but I think that has huge implications for how the census can be done in 2020. I would just encourage you to look at that as well.

Senator CARPER. OK. Thanks.

A couple questions for Mr. Castro. I think I noted in your biography that you worked at GAO for a while. When were you there?

Mr. CASTRO. In 2006.

Senator CARPER. For one year?

Mr. CASTRO. For one year.

Senator CARPER. OK. Was it a pretty good year?

Mr. CASTRO. It was a good year, got a lot done.

Senator CARPER. What was your job then?

Mr. CASTRO. I was an information security analyst.

Senator CARPER. OK. I thought each of you did just a very nice job with your testimonies, and I thought you did an especially nice job taking some fairly complex concepts and making them, even for guys like me, understandable, which is no small gift.

Dr. Cook, in looking at your background, I think you went to graduate school, maybe got your Ph.D. at the University of Texas?

Dr. COOK. Yes.

Senator CARPER. They have great athletic teams as well as good academics, and I am trying to remember last—was it last night when we had the women's NCAA playoff?

Dr. COOK. That was A&M, yes.

Senator CARPER. Yes, it was A&M, but A&M and Notre Dame, and Texas A&M won.

Now, I know from some of my friends who have gone to A&M and others who have gone to Texas that they do not always see eye to eye and there is like a friendly rivalry, kind of like Ohio State and Michigan.

Dr. COOK. Yes.

Senator CARPER. Is there still that rivalry?

Dr. COOK. Oh, yes, big time.

Senator CARPER. When Texas A&M, the Aggie women basketball team, take it all and win the NCAA, how do they feel at the University of Texas about this, the home of—

Dr. COOK. I have no idea. [Laughter.]

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I was in graduate school there and had no time for athletics.

Senator CARPER. I understand. All right.

I think the last thing I want to mention here is sort of putting all this in context—and I will go back to where I started off. We face huge budget deficits. We also have a growing population and a need to count us well, accurately, and so the next time that we try to figure out how many U.S. Representatives are going to go to particular States, large and small, what should they get? We want to be able to ensure that when city councils or county councils are apportioned that they actually get the numbers right and the apportionment right. One of the reasons why that is because we want people to sort of trust and believe in their political system. Democracy is a hard enough system anyway, but it is important that we get the numbers right and the apportionment right so that the right number of people get the right amount of representation.

The other thing is that a fair amount of money is apportioned or distributed based on population, and we want to ensure that we do the best job that we can. So sort of putting this in context, why is it important for us to have an accurate census? Well, because there is a lot of money that flows from the census, either to the right places or, frankly, not the right places. And the other thing is sort of the basic bedrock of our democratic society is making sure we know how many people live in a particular place so they get the appropriate representation, at least the numbers of representation, hopefully the appropriate representation, too.

And, last, to put it in context, we are having this battle not over the long-term budget. We are having what I call a skirmish now in terms of what are we going to pass for a spending plan for the next less than 6 months to fund the government to the end of this fiscal year, the end of September. Those are important issues, but the really big issues of what are we going to do for the next 6 years or the next 16 years to ratchet down our deficit and get it back in control. And we need to look in every nook and cranny of our Federal Government in order to find ways to do a lot of the traditional things that we have done better, more accurately, and more cost-effectively. And some of the new things that come along, to be able to use—really to put in place what I call a culture of thrift in all aspects of our government.

You all have been very helpful in your testimony today in helping us to look through this lens just a little differently, maybe look through a little different lens, to get us to that outcome, which we all seek, and that is better results for less money, or at least better results for not much more money.

Dr. COOK. Less money.

Senator CARPER. Maybe less, that would be good. That is what we are shooting for.

All righty. Again, Members of our Subcommittee will have a couple of weeks to submit questions to you, and we would ask that if you get any questions, respond promptly. One of the questions you will probably get from me is the legislation that Senator Coburn and I sought to move last time, we are going to try to move similar legislation this time. We would welcome any thoughts that you have as to how we might amend our earlier version from the last

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Congress and add an aspect or two or maybe take something away or amend something. So we would welcome your input there.

Again, you all have done a very nice job, and we are grateful to you for your time and for your input.

With that, this hearing is—and I also want to say to our staffs, too, to our Democratic staff, to our Republican colleagues, how much we appreciate the work that they have done in preparing for this day and for the follow-up that will flow from it.

All right. With that having been said, this hearing is adjourned. Thanks so much.

[Whereupon, at 3:33 p.m., the Subcommittee was adjourned.]

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# APPENDIX

**FOR RELEASE: April 6, 2011**
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## U.S. SENATE COMMITTEE ON HOMELAND SECURITY AND GOVERNMENTAL AFFAIRS

## SUBCOMMITTEE ON FEDERAL FINANCIAL MANAGEMENT, GOVERNMENT INFORMATION, FEDERAL SERVICES, AND INTERNATIONAL SECURITY

### HEARING: "Census: Learning Lessons from 2010, Planning for 2020"

WASHINGTON – Today, Sen. Tom Carper (D-Del.), Chairman of the Senate Subcommittee on Federal Financial Management, convened the hearing, "Census: Learning Lessons from 2010, Planning for 2020." The purpose of the hearing was to identify lessons learned from the 2010 Census, identify technological advances that can be used to improve data quality and reexamine areas that could help produce a more cost-effective 2020 Census.

For more information on the hearing or to watch a webcast of the hearing, please click HERE.

*A copy of Sen. Carper's remarks, as prepared for delivery, follows:*

**"Today's hearing will examine lessons learned from the 2010 Census while identifying initiatives that show promise for producing an even more accurate and more cost-effective census in 2020.**

**"I would like to begin by congratulating Dr. Groves, his predecessor, Dr. Murdock, and the career professionals at the Census Bureau who did an outstanding job in carrying out the 2010 Census. As a result of their hard work, the Census Bureau was able to overcome a number of operational and organizational challenges, including shortcomings with critical information technology systems. The Bureau completed key operations on schedule, hired nearly 900,000 temporary workers, obtained an acceptable participation rate of 74 percent and managed to report its population figures in time to support redistricting.**

**"Despite these achievements, the 2010 Census was the most expensive in the nation's history by far, even taking inflation into account. The total cost of decennial operations escalated from an initial estimate of $11.3 billion to around $13 billion. Even more disturbing is the fact that, with all the modern scientific improvements and technological advancements that have been made over the years, the framework for conducting the 2010 Census was based off of a model we used in the 1970's.**



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"Although the methodological basics of the census have remained the same over the past 40 years, the cost of the census has decidedly not. The average cost per household was $98 in 2010, compared to $70 in 2000 and $16 in 1970. And I've been told that the total cost of the 2020 Census could rise to as much as $30 billion. This, in my view, is not acceptable. It's especially not acceptable at a time when we're struggling to find solutions to the serious deficit and debt crises our country is currently facing.

"I've spoken at previous hearings about the need for us to look in every nook and cranny of the federal government – domestic, defense, and entitlements spending, along with tax expenditures – and ask this question, "Is it possible to get better results for less money?" The hard truth is that many programs' funding levels will need to be reduced. Even some of the most popular and necessary programs out there will likely be asked to do more with less. The Census Bureau, despite the vital and constitutionally-mandated nature of its work, cannot be immune from this sort of examination.

"While most Americans want us to reduce the deficit, determining the best path forward will not be easy. Many believe that those of us here in Washington aren't capable of doing the hard work we were hired to do – that is, to effectively manage the tax dollars they entrust us with. They look at the spending decisions we've made in recent years and question whether the culture here is broken. They question whether we're capable of making the kind of tough decisions they and their families make with their own budgets. I don't blame them for being skeptical. And I'm afraid that their skepticism proved to be well-founded when looking at the kind of avoidable management failures that contributed to the growth in cost of carrying out the 2010 Census.

"Today, we will look at the Bureau's planning efforts for the 2020 decennial, and although it's nine years away, it's never too early to start to thinking about ways to reduce costs and improve quality through more efficient data collection. More importantly, we need to make certain that the issues that lead to the failures and cost overruns we saw in recent years have been addressed and will not reoccur. Taxpayers should not be expected to pick up the tab for them again.

"Looking ahead, the Bureau's research should focus on how existing technology can be incorporated into the 2020 design. Obviously, the internet is here to stay and, according to experts, an internet response option could have saved the Bureau tens of millions of dollars in processing costs in 2010. Future research should not only focus on how to implement internet data collection, but also on how to reap the benefits – financial and otherwise – of it and other technologies the next time around. We also need to make certain that the people who make up our growing and changing country are comfortable enough with the security of the data collection methods we use to allow for an accurate census.

"Moreover, steady leadership will also be critical in reversing a trend of decennial censuses marked by poor planning and escalating costs. The 2010 Census experienced several changes in leadership and vast spans of time with acting or interim Directors, further putting the operation at risk. In the 27 months leading up to Census Day, the Bureau had three different Directors. I plan to introduce legislation this year that would, among other things, make the Director of the Census Bureau a Presidential Term appointment of five years. A fixed term would help avoid leadership gaps during critical decennial census planning stages and facilitate the longer-term planning so vital to decennial censuses.

"Senator Coburn and I introduced legislation last year to establish a term appointment for the Census Director and to make a number of other changes at the Bureau aimed at preventing serious problems in the future. It passed the Senate unanimously but failed in the House. I'd like to work with Dr. Groves to make whatever changes are necessary to put together something that addresses the lessons learned from 2010 and can again enjoy bipartisan support in Congress.

**"I look forward to hearing from our witnesses today, who will help us to identify ways to best balance the need for an accurate census, with the need to ensure a reasonable cost for this endeavor."**

**###**

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Opening Statement by Senator Scott P. Brown

April 6, 2011

Subcommittee on Federal Financial Management, Government Information, Federal Services, and International Security

U.S. Senate Homeland Security & Governmental Affairs Committee

**"Census: Learning Lessons from 2010, Planning for 2020"**

Thank you, Chairman Carper, for holding this hearing on a topic as important as the Census.

As required by the Constitution, our country has conducted a Census every ten years since 1790. The Census is a vital undertaking as the results are utilized for apportioning seats to the House of Representatives, redistricting and determining the annual distribution of more than $400 billion dollars in federal and state funds.

While we must strive to ensure every person is counted, we simply cannot afford the out of control cost of conducting the Census as it has been done for the past forty years. The cost of counting each housing unit has escalated from an average of around $16 in 1970 to around $98 in 2010. As I have learned in my brief tenure here, we simply cannot continue to do things the way we always have and expect a different result.

For the most part the basic model of Census taking has not changed since the 1970 Census, including relying on the mailout and mailback of Census questionnaires. Yet, as everyone knows, this country has experienced an information technology revolution during that time with an array of internet based technologies like e-mail that are threatening age old communication methods like mail. Unfortunately, even though

we are a world leader in inventing and commercializing technological innovation we are lagging behind other countries like Canada in integrating the internet into the Census. I am convinced that we can break this vicious cycle of escalating costs by making the 2020 Census more efficient and cost-effective than its predecessors.

While I expect the Census Bureau to "say" the right things about reforming the Census process for 2020, I have been here long enough to know that the taxpayers and Congress have a right to remain skeptical until the needed changes and results are produced. I intend to do my part in providing the requisite oversight that is needed to ensure that the Census Bureau stays on the road to reform.

The Census, like other important government activities, should not be immune from scrutiny as we cannot afford to continue to spend more and more taxpayer dollars to achieve our objectives. Just like every other government undertaking we must do things better, smarter and more efficiently.

I would like to thank the witnesses for being here today and I look forward to a productive discussion on not whether the Census process should change in 2020, but how. I also look forward to a discussion of the lessons learned from the 2010 Census and how these may be instructive for 2020.

**PREPARED STATEMENT**

**ROBERT M. GROVES, DIRECTOR**
**U.S. CENSUS BUREAU**

**CENSUS: LEARNING LESSONS FROM 2010, PLANNING FOR 2020**

**BEFORE THE COMMITTEE ON HOMELAND SECURITY AND GOVERNMENTAL AFFAIRS**
**SUBCOMMITTEE ON FEDERAL FINANCIAL MANAGEMENT, GOVERNMENT INFORMATION, FEDERAL SERVICES, AND INTERNATIONAL SECURITY**
**U.S. SENATE**

**6 APRIL 2011**

Mr. Chairman, Members of the Subcommittee, thank you for inviting me to discuss the lessons learned from the 2010 Census. U.S. Commerce Secretary Gary Locke and I were committed to ensuring a successful 2010 Census and we are both proud that the 2010 Census was completed on time and under budget. With that backdrop, now is an opportune moment to further examine the results and operations of the 2010 Census, as it can help put the first results of the census in context. This discussion also allows me to report on the foundation for the U.S. Census Bureau's activities for the next several years: focusing on innovating to provide high quality statistical information whenever possible at lower costs.

The Census Bureau has a formal program for decennial census evaluations and assessments, which is called the 2010 Census Program of Evaluations and Experiments. There is also the Census Coverage Measurement program, which is also known as a Post Enumeration Survey. The Post Enumeration Survey provides sample-based estimates of undercounts and overcounts. Over the next two years, these programs will provide extensive analyses for the entire range of census operations, from address canvassing through enumeration to dissemination.

Today, however, I will share some information from early empirical performance indicators and a more qualitative lessons-learned process. They are a large part of the perspective on building a better 2020 Census. So far, I am encouraged by the early indicators.

## EARLY INDICATORS OF THE QUALITY OF THE 2010 CENSUS

There are three types of performance indicators used to evaluate censuses around the world:

1. Process indicators of how the operations progressed;
2. Results of alternative ways of measuring the population; and
3. Results of the Post-Enumeration Survey.

While each of these indicators is imperfect, they together provide the full set of information we now have in part to answer the question, "How good are the 2010 Census counts?"

***Process Indicators.*** I would like to review several process indicators: the mail return rate, the proxy rate from non-response follow-up, a few indicators from the data capture operations, and item missing data rates.

The mail return rate in the 2010 Census matched the mail return rate for the short form in the 2000 Census. When one combines the long and short form experience of 2000, the 2010 Census mail return rate was actually better, with a higher percentage of households returning their forms. I think several efforts contributed to this particular success, including the mailing strategy, the partnership program, and advertising. Moreover, the mail return rate provided a great platform for the remaining census enumeration operations.

The second process indicator is the proxy rate, which represents the number of households from which we did not receive direct information, but rather information from a neighbor, building manager, or other knowledgeable person. This occurred after we visited the housing unit repeatedly as many as six times, but were unable to make contact with the resident. The proxy report rate for the 2010 Census non-response follow-up operation was approximately 22 percent, compared to 17 percent for the 2000 Census. This is worse than 2000, but we still have many other quality measurements that will tell us more about the quality of the data.

However, I am pleased to report that there are some positive indicators from our data capture operations. We processed over 3.3 billion information fields. We rely on information technology to read these fields, and only when there is an issue do we send the form to a clerk to examine the field and enter the information. This human check is costly, and an important objective for data capture was to reduce our reliance on clerks, and we were successful. The rate of successful machine reads was slightly higher for this census than it was for the 2000 Census. In 2000, the machines failed to read approximately 0.1 percent of the checkboxes. For the 2010 Census, the machines only failed to read approximately 0.03 percent.

For the write-in fields, the difference between 2000 and 2010 is even larger and reflects the increased sophistication of the optical character reading technology. In 2000, the machines failed to read 16 percent of the write-in answers; we reduced that to 12 percent in 2010. We saved $36 million in staff costs because fewer forms were sent to the clerks.

Overall, the percentage of persons for whom usable response data was obtained from either the mailback or a face-to-face interview was similar in the 2010 Census (99.61 percent) as in 2000 (99.57 percent). At a state level, we reported that more states exceeded their usable information rate obtained in 2000 than those doing worse. At counties and census tracts levels we have similar positive results. It is very desirable to find low variation over states, counties, and census tracts on these indicators. The variation at those levels is lower in 2010 than in 2000.

We have just obtained information about response rates to specific questions on the census and can make some comparisons to the 2000 Census. For the questions on age, sex, race, and

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Hispanic origin, we saw a slight decrease in the percent of the population that answered the questions versus in 2000. For example, the item with the largest decline is Hispanic Origin; reported by 94.0 percent of persons in 2000 but by 92.8 percent in 2010. This decline is not desirable; it is a combined effect of greater proxy cases and failure of householders to fill out an item; but the differences are small.

Finally, as the committee already knows through our periodic briefings during data collection, most of our field operations ended early and under budget. Out of an approximately $7 billion budget in FY 2010, we completed all operations with $1.87 billion left over. We were lucky in that the contingency funds we had set aside for hurricanes, floods, epidemics, and other possible disasters were not needed. We think a good part of the savings was because the wonderful staff we were able to hire in these times of high unemployment worked more efficiently than our productivity models suggested. We thank the hundreds of thousands of staff who did a great job for the country.

***Alternative Ways of Measuring the Population.*** Another quality indicator is whether we obtain results similar to the 2010 Census using alternative methods. Demographic Analysis is the classic method of establishing an independent estimate of the nation's population and the Census Bureau has conducted this analysis since the 1970 Census. We delivered the results of the Demographic Analysis on December 6, 2010, two weeks before the census apportionment data were released. We used the data on births and deaths, international migration, and Medicare enrollments to provide national totals that are broken down by age, gender, and Black/non-Black status, and for the first time, the Hispanic population under age 20.

For the 2010 Demographic Analysis, we released five series of estimates. In January 2010, we met with prominent demographers from academia and found a lack of professional consensus on the size of the immigrant population. Therefore, for this reason, we released five alternative estimates based on different assumptions on immigration. Moreover, for the first time the Census Bureau has provided these alternative estimates prior to the census apportionment release in an effort to be completely transparent about their independence from the 2010 Census counts.

We presented a range of estimates from a low of 305 million people to a high of 312 million people. The official 2010 Census count released on December 21, 2010, was 308.7 million, just a few hundred thousand more than the middle Demographic Analysis estimate —in fact, within .09 percent (see Figure 1). In other words, the estimates were virtually the same. As with science in general, when independent methods yield the same result, we are more confident in the results.

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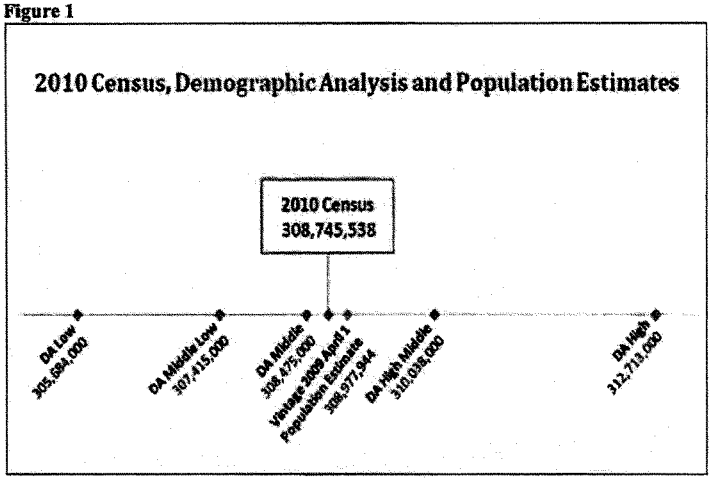
**Figure 1**




We are also comforted by another estimate, and that is the number for the total population from our official Population Estimates program as of April 1, 2010, which is also represented in Figure 1. The population estimates are based on the 2000 Census, as the benchmark, and are updated on an annual basis to reflect births, deaths, and migration. These estimates are, however, distinct from Demographic Analysis because they are benchmarked to the previous census, and are not used to measure the accuracy of the census. They are another way of estimating the nation's population, apart from the current decennial census. And once again, like Demographic Analysis, the 2010 population estimates were quite close, within 0.8 percent, to the 2010 Census.

The population estimates provide additional information about regional and state population totals, which along with information from the American Community Survey, can tell us even more about the changes that occurred in the states over the past decade, especially with regard to migration. In fact, these data may be viewed as corroborating evidence to the regional shifts we observed in the official census.

When we drill down to states and counties with the population estimates, we see smaller variations for 2010 than in 2000. For instance, when we compute a difference between the census count and the population estimates at the state and county levels we see smaller mean differences at those levels and less variation over the geographical units. These are desirable results.

***The Post Enumeration Survey.*** The Post Enumeration Survey is an independent large-scale sample survey of approximately 170,000 housing units. The in-person interviews were conducted in August through October of 2010. We compare the results of this survey to the

results of the census to produce measurements of census overcounts, undercounts, and components of census coverage by certain census operations, such as the non-response follow-up and coverage follow-up operations. We will also produce estimates of coverage for the major race groups and for Hispanic Origin.

The final results from the survey will be available in 2012. However, I do have some preliminary information from its address listing and personal interview operations. First, as part of this survey, we conducted an independent address listing to create the frame, and this listing was later compared to the preliminary 2010 Census address list. When we compared the Post Enumeration Survey address list to the census address list, we had a 96.5 percent match compared to a 91.4 percent in 2000, whether or not they were correctly enumerated. Second, the preliminary calculation of the percentage of correct enumerations for the 2010 Census (the percentage of those who should have been enumerated who actually were enumerated) was 96.3 percent, compared to 89.9 percent for the 2000 Census. The percentage of duplicate enumerations for the 2010 Census is 0.79 percent compared to 1.05 percent in the 2000 Census. When compared to the 2000 Census, these are improved results that point toward better overall coverage in the 2010 Census.

Finally, however, there are also some findings with regard to the match rates for urban and rural areas. Just as with the 2000 Census, there is a higher match rate for urban addresses than for addresses in rural areas. Yet, we have seen a reversal in the rate of correct enumerations among the matched units between these areas in 2010, with a higher rate of correct enumerations for the urban areas than the rural areas. We are only just beginning to delve into the results so it would be premature for me to speculate. But, this observation is an example of something that we will pursue as part of the Post Enumeration Survey evaluation.

In summary, the vast majority of the initial quality indicators are coming in positive for the 2010 Census. These are all preliminary indicators; we will be learning much more during this year and next.

## BUILDING THE CENSUS BUREAU OF THE FUTURE

I want the committee to know that although recently many of the resources of the Census Bureau were devoted to conducting a successful 2010 Census, we have also been engaged in a variety of organizational change initiatives. The rationale for these is simple:

1. The difficulties of measuring the busy, diverse, and independent American society and economy are increasing every year (that is, it costs more money to do the same things we have done for years);
2. The demands by American business, state, local, and community leaders for statistics on their populations are continually increasing;
3. New technologies are being invented almost daily that can be used to make it more convenient for the American public to participate in these efforts to inform us about the status of the country;

So, we conclude that our current "business model" of collecting social and economic data face many challenges over the long run. We at the Census Bureau know that we must innovate if we are to remain useful and relevant to the country. Further, we know that this innovation is not likely to be funded by added resources; we must become more efficient.

I want to tell the committee what we have been doing to build a Census Bureau that can supply the country credible and cost-efficient economic and social statistics in the future.

***Employee-led Cost Savings.*** Last year, the Census Bureau established the Improving Operational Efficiency program, where we asked all of our employees for proposals to improve efficiency by saving money or staff time. We found that this process was liberating and empowering for the employees. For the FY2010 program the employees provided more than 650 proposals on a wide range of topics, from human resources management to survey operations to IT functions. My deputy and I reviewed every proposal; and an executive leadership team made final selections. I am pleased to report that many of those proposals were so compelling and nearly costless that we simply said "yes" and empowered employees to proceed.

We also received proposals that were much more comprehensive, needed seed funding, and have the potential to fundamentally shift our business processes. We asked employees to prepare a business case for twenty of these proposals, and we have selected twelve of those to move forward into development, which means that we are committing resources to their development. These proposals range from the development of an integrated logistics support system for the field data collections; to the development of a database with contact information for building managers that will enable us to reduce the number of visits to multi-unit buildings; and to the implementation of an enterprise-wide human capital management system. Each of these projects will pay off its initial investment in cost savings within three years. This will allow us to continue to invest in innovative and efficient business practices that will help us better meet the nation's evolving data needs.

***Survey Client Cost-Saving Teams.*** As this committee knows, the Census Bureau collects economic and social survey data for many other federal agencies; we are an important hub for the federal statistical system. Thus, our costs of data collection affect the costs of other agencies. We have an obligation to those clients to ensure that we are cost-effective. Over the past year, we have developed ideas in collaborative teams with our clients for reducing the cost of surveys while maintaining high quality data. As a result, we are transforming our method of tracking costs during data collection, increasing the transparency of our field activities, re-examining the management infrastructure for our surveys, increasing the active analysis of process data to improve operational efficiency, and improving our cost-modeling expertise. Real savings are possible, but involve changes we must make in concert with our clients.

***Building Organization-Wide Solutions; Attacking the Silos of the Organization.*** Every large organization faces the threat of quasi-independent subunits not working together, but instead jockeying for power and resources. We have recognized this problem at the Census Bureau. There are three areas where we have mounted initiatives to minimize this organizational

weakness: the human resources initiatives, the IT enterprise architecture initiatives, and the structural reorganization of the Census Bureau.

*Human Resources Initiatives.* We want to make the Census Bureau the best place to work for statisticians, economists, computer scientists, geographers, and other staff. We want a diverse, creative, enthusiastic staff to experience new challenges throughout their career. We have instituted a "corporate hiring" program to assure entry-level statisticians that they can move around the Census Bureau, building their human capital and contributing to diverse work environments, instead of being assigned to one area of the Census Bureau for much of their career. We have instituted a Senior Executive Service mobility program to move innovation invented in one silo to another. In all communications with staff we are emphasizing both the personal and organizational benefit of career moves across the different subunits of the Bureau.

*IT Enterprise Architecture.* We are instituting key reforms in Information Technology (IT) management. Our efforts reflect a greater emphasis on the Internet and cloud computing to support internal operations and public outreach, as well as efforts to consolidate IT resources and establish enterprise solutions. For example, we are in the process of consolidating two major data centers into one center, a center that will support not only the Census Bureau's activities but also those of other Department of Commerce agencies, such as the International Trade Administration.

In addition, we consolidated 52 different data storage systems into seven systems, resulting in immediate and long term cost savings, as well as reductions in maintenance and contractor support. In FY11, these cost savings are $1.0 million. We have also launched a technology innovation center that will provide a laboratory for us to develop and test new technologies. In fact, we are already testing new technologies that will support telecommuting in a secure and cost-effective manner.

We have also expanded our Internet data collection capabilities. By the end of the year, we hope to provide an Internet response option for 60 surveys, allowing approximately 900,000 respondents the opportunity to provide their responses online.

Finally, we are utilizing a combination of census private cloud and public cloud solutions, allowing us to leverage commercially available software and systems, which, in turn, allows us to avoid the cost and delay of establishing these environments ourselves. One public cloud included the Akamai Content Delivery Network. Utilizing this cloud platform allowed the Census Bureau to stand up this capability in less than a month as opposed to it taking 6 months, improved our security posture and enabled the Census Bureau to save $1.5 million.

*Census Bureau Reorganization.* I thank the Congress for approving a structural reorganization to facilitate all of the initiatives above. This reorganization has given us the ability to reshape our research directorate to perform mission critical research, construct prototype innovation, and collaborate with program divisions to implement better and cheaper methods. It has created a new directorate for the 2020 Census, which will grow over time to fit the functional needs of the 2020 design. Also, we have constructed a multidisciplinary 2020 Census Steering committee of senior executives, to govern the process of integration of IT, Budget, Field and Research

directorate staff with the 2020 Census planning. Finally, we have created a Risk Management Staff that reports to the Director's office, to oversee ongoing review of key programs, and to spread the culture of risk management throughout the full organization.

## PLANNING FOR THE 2020 CENSUS

We want to use a reinvigorated, more integrated, more operationally efficient Census Bureau to build a strong 2020 Census. Some of the guiding principles of the 2020 Census planning effort result from lessons learned in the 2010 Census.

*Lesson 1:* The multi-decade cost increase of the decennial census must be halted. Hence, the first principle for 2020 is that we are attempting to design a 2020 Census that costs less per housing unit than the 2010 Census, while maintaining the quality of the results. We have looked at the cost trend of the last several decades, and we know that this trend is unsustainable. One of the ways we can do this is to update the Master Address List, used as the basis of the census, continually in small steps rather than mount an expensive exercise at the end of the decade. Another way we can do this is to maintain our collaboration with over 257,000 partnership organizations throughout the decade using modern communication tools instead of mounting an independent partnership operation later in the decade. The most important cost savings, however, must focus on the non-response follow-up operation.

*Lesson 2:* Traditional non-response follow-up procedures are inefficient and costly. We must make the census more convenient to diverse groups in society. Thus, the second principle is that the 2020 Census will be a multiple-mode census, using mail, telephone, internet, face-to-face, and other modes as they emerge. We have to move beyond the mailback questionnaire and the personal interview. We need to ensure that the response options for the census reflect the communication platforms that people are using. The only way to reduce the size of the expensive field non-response follow-up operation is to increase the convenience of responding to the census.

*Lesson 3:* Systems development that requires first-use perfection must be abandoned. In the 2010 Census we were developing critical systems weeks before their use; important weaknesses were discovered in the early days of production. The third principle is that we need end-to-end tests of production systems, which use all subsystems in the integrated form needed in the production phase. New system capabilities will be developed in an incremental and modular fashion so that users have a chance to test and evaluate mission critical systems well before they are deployed to production environments.

*Lesson 4:* Too few of the system and procedure developments of the 2010 Census were designed to have residual benefits to other Census Bureau data collections. All of the valued demographic and economic data we produce use operations similar to those of the decennial census. There were too few plans to utilize the systems built for the decennial to enhance the efficiency of our many other survey operations. As a result, the large investment benefited only the decennial program, not the bulk of the Census Bureau. Thus, the fourth principle is to develop systems within similar survey production environments within the Census Bureau, test and enhance them

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repeatedly over the decade, ramp them up for use in the 2020 Census, and then continue to use and enhance them in our ongoing surveys. We plan to use the American Community Survey as the chief test-bed for 2020 Census systems development.

*Lesson 5:* The short form and replacement questionnaire provided cost-saving benefits to the 2010 Census. With the ongoing American Community Survey, the Census Bureau is providing the needed socio-economic, housing, occupation, and commuting data that are important to local communities. Utilizing the decennial census to mainly focus on the key reapportionment and redistricting purposes was wise. Thus, the fifth principle is to build on the success of the reduced burden of the 2010 short form.

*Lesson 6*: A small number of large tests create intolerable risks for the Census Bureau. The sixth principle is to mount many, small tests throughout the decade. We are committing to a faster cycling of ideas and testing, relying on a lot of small tests versus a small number of large, expensive tests. For example, although we cannot know the full features of the Internet option for the 2020 Census, we will have repeated tests of Internet census measurement throughout the decade, using platforms that will increasingly resemble those available in 2020.

*Lesson 7:* In my professional judgment, the voluntary partnerships with over 250,000 local and national organizations, coupled with a paid advertising campaign successfully improved awareness of the coming Census. We have empirical evidence of the increasing awareness of the Census as the partnership and advertising campaign rolled out. Thus, the seventh principle is that we would like to keep these relationships warm, to seek input from these groups to inform the 2020 campaign, and to return to them Census Bureau data useful to their organizations.

*Lesson 8:* Updating of the master list of addresses using the Postal Service list produced a stronger list in 2010. We want to build upon this success this decade. One critical component is the Geographic Support System Initiative (GSS), an integrated program to improve address coverage and provide continuous spatial feature updates, as well as enhanced quality assessment and measurement. Geospatial information undergirds all of the census and survey programs, making it a fundamentally important contributor to providing high quality data. This interdivisional effort works across silos, drawing on support from fifteen divisions within the Census Bureau, including Acquisitions, American Community Survey, Decennial Management, Geography, and Field, as well as the Chief Information Officer. GSS is also an interagency effort, as we have asked the U.S. Geological Survey, the National Geodetic Survey, and the U.S. Postal Service to participate on the working teams. As a part of these efforts, the Census Bureau hopes to initiate programs to work with partners, both public and private, to receive addresses continuously throughout the decade, and to update our systems so that we can more fully leverage GPS and GIS technologies and resources.

We are incorporating these principles into our planning and management in order to most efficiently focus on increasing the convenience of census participation to the diverse groups within our society. Further, in the Fiscal Year 2012 budget request, the Census Bureau is requesting $67 million to fund the first of a three-year research and testing phase of the 2020 Census. This initiative is designed to identify new decennial census systems and methods which will provide cost savings while maintaining high quality of census data and results.

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We know of no single method of collecting census data that is optimal for all residents of the U.S. Some residents have told us they do not want people visiting their home; some residents told us to use information they have already provided in other government forms; some residents want to use the Internet at any time of the day on any device they favor to fit their lifestyle; and some want to speak by telephone to someone guaranteed to speak their language and understand their sub-culture. By making the census more convenient, we hope to reduce the size of very expensive field follow-up activities. This is the most expensive part of the data collection, and by concentrating our efforts there, we want to achieve a quality census at a lower cost per household.

I want to thank the committee's members and staff for meeting with me over the past few months to hear updates about the progress of the Census. The oversight inquiries you have provided over the past months helped to make the 2010 Census better. Thank you.

I would be happy to answer any questions.

**Testimony of**

**THE HONORABLE TODD J. ZINSER**

**INSPECTOR GENERAL**

**U.S. DEPARTMENT OF COMMERCE**

**before a hearing of the**

**Subcommittee on Federal Financial Management, Government Information, Federal Services, and International Security**

**Committee on Homeland Security and Governmental Affairs**

**United States Senate**

***Wednesday, April 6, 2011***

# *Top Management Challenges for the 2020 Census: 2010 Lessons Learned, Looking Ahead to 2020*

Chairman Carper, Ranking Member Brown, and Members of the Subcommittee:

I appreciate the opportunity to testify today on lessons learned from the 2010 Census and to look ahead to 2020. Decennial operations were successfully completed in 2010, and Census is now preparing its assessment of decennial accuracy, to be issued next year. It is clear, however, that this Constitutionally-mandated function carried with it a high cost and a level of risk that should not be repeated.

As we look ahead, there can be no question that the next decennial must incorporate bold approaches in order to achieve cost containment while maintaining or improving accuracy in enumerating an ever-growing and increasingly hard-to-count population. The next census thus



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calls for new design elements and meticulous planning and testing—along with unprecedented transparency on the part of the Census Bureau, including early and continuous engagement with key stakeholders.

My testimony today is informed by the extensive oversight we have provided over the last decade to both the planning of the decennial and its execution. Our 2010 decennial oversight program sent over 100 OIG staff to every state and the District of Columbia to observe temporary Census workers check address lists and maps and interview respondents in person and over the phone—and back to Census Bureau headquarters to track final Census count review operations. We spoke with numerous Census Bureau officials, met with regional managers, interviewed dozens of local Census office teams, surveyed hundreds of Census employees, and observed hundreds of temporary field workers. We provided feedback to stakeholders on headquarters activities and from the field—in reports, in testimony, and in real-time communication. Census was very responsive when addressing problems we identified in the field, taking immediate action to rectify issues most in need of attention.

From this unique perspective, we saw Census Bureau successes as well as missed opportunities. Among its successes, the bureau followed through on its plans to transition the decennial long form to the American Community Survey (ACS), leaving the entire decennial survey with only 10 short-form questions designed for easier response. Census conducted a strategic communications campaign, which contributed to a noteworthy mailback participation rate of 74 percent nationally. And the 2009 address canvassing operation used handheld computers, representing the bureau's first foray into computer-automated field data collection for a decennial census.

However, plans for automated field data collection had to be greatly curtailed. Because of setbacks developing the handheld computer, this device was abandoned for nonresponse followup, which once again was paper-based. Problems implementing the handheld computer and related automation compelled late-stage preparations for a pen-and-paper nonresponse followup, which led to major cost escalation, disruption of workflow, and high operational risk. Because of these circumstances and cost estimation weaknesses, the lifecycle cost for the 2010 decennial—originally estimated at more than $11 billion—reached a total exceeding $12 billion.

The bureau is implementing an ambitious program to evaluate the quality of the 2010 decennial counts, as well as the design, methods, processes, and operations. Census should take full advantage of the results to build upon its success and overcome shortcomings as it plans and designs the 2020 Census.

Considering the current trends in population and likely cost growth, the Government Accountability Office (GAO) recently estimated that if 2010 were used as a model for the next census, the total price tag could rise to as high as $30 billion; the bureau's own estimate is $22 billion (see figure 1). By either estimate, such cost growth is simply unsustainable. Census must make fundamental changes to the design, implementation, and management of the decennial census to obtain a quality count for a reasonable cost. And in order to decide on, design, and implement these changes, this effort must start now. This decade's early years are critical for setting the course for how well the 2020 count is performed and how much it will ultimately cost.



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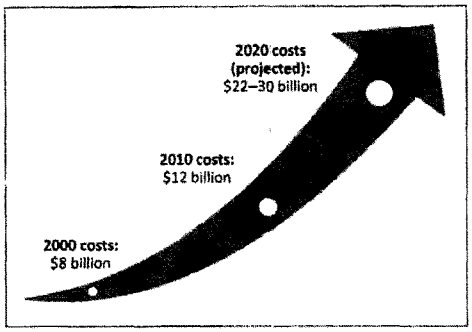
Figure 1. **Increasing Lifecycle Costs for Decennial Census (2000–2020 Projected)**




*Source:* OIG analysis of U.S. Census Bureau information

Although the pace of decennial census change can at times seem dauntingly slow, Census has implemented continual improvements in recent decades in operations, coverage methods, and automation. Nevertheless, important initiatives designed to improve accuracy and contain costs—in areas such as use of administrative records, address file improvements, and automation of field data collection—have had only limited success, leading to recurring calls for change at the beginning of each new decade.

My testimony today covers 7 challenges that, in our view, the Census Bureau must effectively address for the 2020 Census. These challenges include changes to the decennial design aimed at cost containment, accuracy, and reduction in respondent burden. Importantly, they also call for fundamental improvements in decennial planning, management, testing, and transparency to help ensure that the missed opportunities of previous decades are not repeated in 2020.

Top management challenges for the 2020 Census are as follows:

1. **Revamp cost estimation and budget processes to increase accuracy, flexibility, and transparency;**
2. **Use the Internet and administrative records to contain costs and improve accuracy;**
3. **Implement a more effective decennial test program using the American Community Survey as a test bed;**
4. **Effectively automate field data collection;**
5. **Avoid massive end-of-decade field operation through continuous updating of address lists and maps;**
6. **Implement improved project planning and management techniques early in the decade; and**
7. **Establish a Census Bureau director position that spans administrations.**



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The Census Bureau and Department of Commerce have the primary responsibility for successfully meeting most of these challenges. However, because fully addressing two of these challenges—the greatly expanded use of administrative records and the continuity of Census Bureau leadership—requires legislative action, the bureau and Department need to work closely with Congress to effect these changes.

**Challenge 1: Revamp cost estimation and budget processes to increase accuracy, flexibility, and transparency**

Throughout the decade, the Census Bureau remained uncertain of what the 2010 decennial's total cost would ultimately be. With a lifecycle cost estimate of more than $11 billion in 2003, the projection topped $14 billion in 2008—due, in part, to escalating IT costs and major flaws in the bureau's cost assumptions—and ultimately totaled in excess of $12 billion as decennial operations concluded in 2010. These fluctuating estimates made planning difficult and consumed an inordinate amount of time and attention on the part of the Department, Congress, Office of Management and Budget (OMB), and other stakeholders. This instability was symptomatic of weaknesses in the bureau's planning, cost estimation, and budgeting processes.

In 2008, GAO reported that the Census Bureau's 2010 lifecycle cost estimate lacked adequate documentation and was not comprehensive, accurate, or credible. The bureau's cost estimate did not adequately document changes in cost assumptions and did not include certain cost factors, such as the cost of fingerprinting temporary workers. For example, the 2009 address canvassing operation was over budget by $88 million because changes in productivity and workload were not taken into account. Without a well-grounded cost estimate, the bureau's annual budget requests were not reliable indicators of actual funding needs for planning and conducting the decennial. The bureau needs to develop a comprehensive cost estimate, including known cost factors and update the estimate throughout the decade to account for changes in decennial plans, assumptions, and incurred costs.

As part of its 2020 decennial planning efforts to date, the bureau has developed initial budget scenarios for four proposed enumeration options. Among these options are targeted address canvassing, administrative records use, and an Internet response option. For each of the options for which a budget scenario was developed, the bureau calculated a range of estimated costs, each with minimum and maximum amounts. The bureau plans to update these scenarios annually to improve future budget requests.

In addition to improving the quality of budget estimates, the Census Bureau also needs to identify areas for achieving cost savings. We have reported on the bureau's deliberate hiring and training of more temporary employees than necessary to offset turnover (a practice the bureau calls "frontloading"). However, frontloading frequently resulted in hiring many more enumerators than needed. For example, more than 140,000 temporary field employees received training (for at least 24 hours) but worked 40 or fewer nontraining production hours—costing the bureau in excess of $80 million in the process. Overhiring is to be expected with any large operation; nonetheless, the employees cost the bureau a great deal of money to train but provided little production (see figure 2).

We have recommended that the bureau re-evaluate its practice of frontloading; the bureau also needs to develop a better process to estimate workload and develop and revise cost assumptions.



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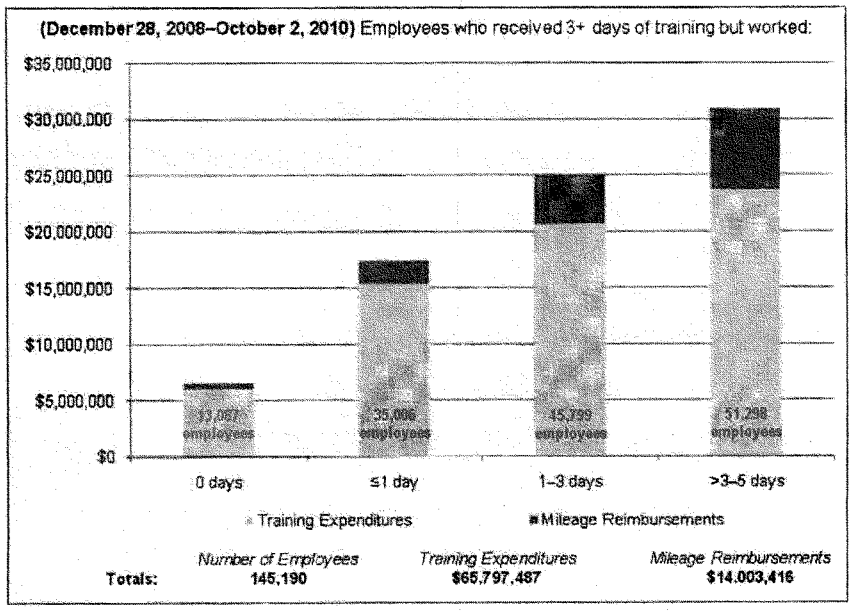
In general, less labor-intensive field operations would reduce wage, training, and travel costs—and potentially reduce the number of field offices, along with space requirements and associated IT infrastructure.

In planning for the 2010 decennial, there was a lack of transparency as the bureau made changes to the originally-conceived census design. For example, in a June 2001 document presenting the potential lifecycle cost savings of the 2010 decennial design, the bureau estimated $155 million in savings from maintaining and updating the address list throughout the decade and using a targeted approach to address listing. This design would avoid an end-of-decade massive address listing operation. In March 2004, Census issued an internal planning memorandum stating that it had abandoned this approach. However, key stakeholders were not aware of this change.

Figure 2. **Cost of Training Employees Who Worked Only 0–5 Days**




*Source:* OIG analysis of U.S. Census Bureau information

Similarly, the Census Bureau did not maintain a transparent budget management process during the decennial census. The bureau shifted funds from activities running surpluses to cover those running deficits. However, it did not maintain traceability of these shifts, which prevented visibility into overruns and underruns in the various decennial activities and operations.

The bureau's 2020 decennial strategy of developing a set of budget scenarios and identifying key decision points is a positive approach to addressing the high degree of uncertainty that inevitably



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exists early in the decennial planning cycle. Census should continue to make its planning transparent, and stakeholders must recognize that once a baseline design and cost estimate are developed, periodic modifications are inevitable. Design and budget changes will occur as a result of research and testing, as a better understanding of the implementation details emerges, and as new information and analysis become available. Thus, the bureau should obtain agreement as early as possible on the basic design components of the 2020 decennial, develop realistic and well-substantiated budget estimates, and work continually with the Department, OMB, and Congress to discuss design changes and make appropriate budget modifications as circumstances warrant.

**Challenge 2: Use the Internet and administrative records to contain costs and improve accuracy**

By not using the Internet and administrative records as key decennial data collection methods for 2010, the Census Bureau turned aside promising cost reductions and data quality improvements. Cost savings from Internet use could potentially have accrued from reducing paperwork and associated data capture costs—for the 2010 decennial, the bureau processed over 164 million paper forms—and less expensive field work, with a smaller temporary work force. Quality could likely have improved through easier access to foreign language Internet questionnaires and automated checks of census responses for consistency and completeness.

Administrative records—information collected for the administration of programs and provision of services by federal, state, and local governments and commercial entities—could have reduced the cost of the nonresponse operations (which, at $2 billion, were the most costly of the 2010 decennial; see figure 3) and helped the bureau avoid inaccurate enumerations. Greater use of administrative records also offered the potential to enhance the decennial census in a number of important areas, ranging from improving the master address file to finding households or individuals who may otherwise be missed.

Using the Internet to collect census data is not new. Statistical agencies in other countries, including Australia, Canada, and New Zealand have employed the Internet to collect census data, and the United Kingdom's plan for its 2011 census includes an Internet option.

An Internet response option would not be new to this country either. The Census Bureau offered an Internet response option in the 2000 decennial but did not publicize its availability. While it received only 65,000 unique electronic submissions, the Internet was deemed a viable response option. The bureau did not, however, implement this option for the 2010 decennial and consequently executed paper-intensive operations, which were cumbersome, error-prone, and expensive.

The bureau included an Internet response option in its Decennial Response Integration System contract, which was awarded in 2005. However, in 2006, the bureau eliminated use of the Internet for this purpose, maintaining that it did not increase response and citing IT security concerns and cost. In 2008, it again rejected an Internet option due to operational and security concerns. The bureau now intends to use the Internet in 2020 and is planning an Internet test as part of the American Community Survey (ACS). Given the pervasiveness of the Internet and the public's ever increasing reliance on it, we find it difficult to envision a 2020 Census without an Internet response option—albeit one that addresses IT security concerns.



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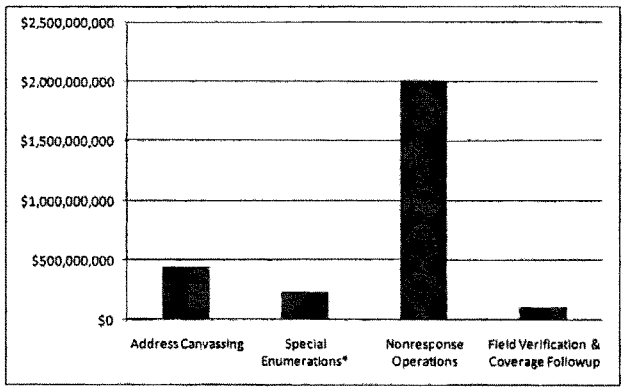
Figure 3. **2010 Census Field Operations Costs**




* Includes enumerating people living in group homes and facilities, transitory locations such as campgrounds and marinas, and hand-delivering questionnaires or conducting doorstep interviews for special areas or populations. *Source:* OIG analysis of U.S. Census Bureau and public information

Administrative records would be useful to the decennial by providing, en masse, individually-submitted data on the receipt of services (such as housing assistance, social services, and health services) and for the payment or documentation of taxes. As various federal government agencies already expend resources to collect these data, directing Census to collect the same information could be considered duplicative effort and costs. The Census Bureau has conducted years of research on the use of these personal administrative records, developing a wealth of knowledge in the processing, matching, and deletion of duplicates for billions of records on an annual basis. Prior censuses and surveys also provide data that the bureau could reuse in support of the 2020 decennial census.

These personal administrative records contain information that individuals have already provided to the government such as their names, addresses, age, sex, race, and a wide variety of demographic, socioeconomic, and housing information. In fact, the Census Bureau has been using the U.S. Postal Services address file, which is an administrative record, to support key address list development activities. It has also employed a variety of administrative records to support its economic and demographic statistics programs.

However, extensive use of administrative records for the decennial has not come to fruition. The bureau abandoned a major part of its plan to use administrative records for the 2000 decennial by December 1996. For 2010, efforts to contain costs focused on automating field data collection; administrative records were only used for limited applications, including the location of group quarters and for the selection of cases for coverage followup operations.

For 2020, the use of administrative records, to contain costs and improve quality, must be explored. Recently, the National Research Council (NRC)—in line with research plans proposed



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within the Census Bureau in the past and now being considered, at least in part, for 2020—urged the bureau to assess the use of administrative records in the 2020 decennial to:

- Improve the Census master address file by identifying missing addresses or entire localities that would benefit from a targeted address canvassing operation;
- Help validate decisions about inconsistent response data concerning particular individuals or households (e.g., a college student listed as living with his parents could be verified or edited using administrative records);
- Target specific field operations by focusing fieldwork on missing respondents or households for coverage improvement or to identify specific subpopulations that require special enumeration procedures;
- Evaluate census results (coverage measurement and evaluation);
- Provide an alternative to last-resort interviews as, after six unsuccessful interview attempts, people who are not household members—such as neighbors who may not be able to answer all of the questions and who may resent the burden of responding—are interviewed; and
- Provide input to methods currently used to fill in missing questionnaire information.

Further, the NRC saw the potential use of administrative records to help eliminate duplicate persons without committing the time, effort, and expense of a followup or field operation.

Popular sentiment about uses of personal information has been evolving with the advent of the Internet; however, the public's view concerning extensive use of administrative records for the decennial census is unknown. The constitutional mandate to conduct a census by definition impacts the privacy of every American—whether it is accomplished by in-person interviews, mail, the Internet or telephone, or through the use of existing records. Census must determine the public's willingness to accept the bureau's use of information collected and maintained by other government agencies—such as Social Security information, tax records, and food stamp registers—for decennial census purposes. The bureau should keep stakeholders—including the American public—apprised of its progress as it researches, plans, and refines the use of administrative records.

The Census Bureau recently restructured its organization in an effort to revitalize its Research and Methodology Directorate; of the five centers the bureau is establishing, the new Center for Administrative Records Research and Applications in particular is designed to help with related decennial innovations. However, the current statutory system does not require the level of interagency cooperation that would allow the Census Bureau to utilize administrative records to their full potential. The bureau possesses appropriate authority to request and use administrative records from all government sources under 13 U.S.C. § 6, and the Privacy Act permits other agencies to disclose their records to the bureau. In contrast, relevant legislation governing other federal agencies either does not compel those agencies to provide their records to the bureau in response to requests, or states that agencies are only required to provide certain information to the bureau, limiting the use of the requested information. Congressional guidance on the disclosure and permitted uses of administrative records for the decennial census would greatly benefit the Census Bureau.



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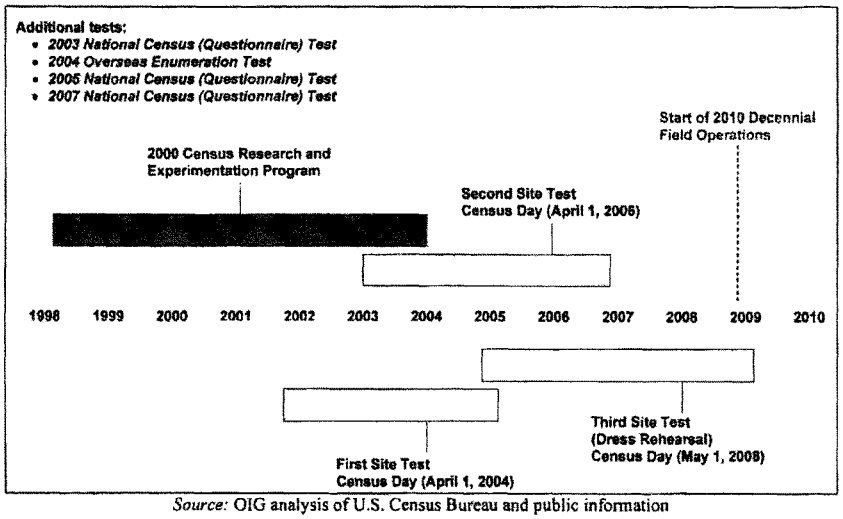
**Challenge 3: Implement a More Effective Decennial Test Program Using the American Community Survey as a Test Bed**

For the 2010 decennial, the Census Bureau embarked on a decade of early decennial planning and testing, which included three major site tests in 2004, 2006, and 2008. In addition to these site tests, Census conducted an overseas enumeration test and three questionnaire content and design tests in 2003, 2005, and 2007 (see figure 4).

Figure 4. **Census Bureau Decennial Testing (2000–2010)**




*Source:* OIG analysis of U.S. Census Bureau and public information

Although the Census Bureau scheduled its site tests at 2-year intervals, each one transpired over 3 years of planning, implementation, and evaluation—resulting in overlap with prior or subsequent tests. This overlap made it difficult for the bureau to build on experiences and incorporate feedback from previous tests into the operational design it examined in the next test. Further, the results of the research and experimentation program from the 2000 Census were intended for use in the design and test of the 2010 Census; however, this program was not completed until 2004, after planning for the first site test was well underway.

This proved particularly problematic in the case of the handheld computers. The bureau tested internally-developed prototypes in both 2004 and 2006 and found serious problems in both tests. Because of the poor handheld performance and the tests' timing, the bureau did not effectively use these tests to help define requirements for the handheld computer contract.

Weaknesses in the decennial test program were also evident in the portion of the 2006 test that the bureau conducted on an American Indian reservation. The objective was to improve coverage of reservation populations, which are considered hard to count. The enumeration procedures



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tested showed almost no effect on mitigating long-standing obstacles to producing an accurate count. Yet the bureau had no time to develop and test possible improvements.

The bureau had planned to conduct a large-scale operational test of major components, operations, and systems, beginning with address canvassing in 2007 followed by enumeration operations in 2008. This test was intended as a dress rehearsal of the 2010 decennial. However, for a number of reasons—including the late decision to revert to a paper-based nonresponse followup operation—Census cancelled the majority of the operations to be tested. As a result, actual decennial operations became the proving ground for enumerating some traditionally difficult groups, such as the homeless, residents of military bases, and group quarters residents.

The bureau is now planning to conduct a larger number of smaller tests—and more closely align its research with its testing program. Census also plans to utilize the American Community Survey (ACS), a mandatory nationwide survey that collects housing and population information throughout the decade (data used primarily for the distribution of federal funds but not for apportionment). Following the 2000 decennial, the ACS replaced the decennial long form for the purpose of providing more current information. ACS is conducted on a continuing basis, sampling about 250,000 addresses every month. By expanding the sample to accommodate decennial testing, ACS will provide an ideal test bed for conducting smaller assessments of new processes and procedures. We suggest that Census use the ACS to explore areas such as questionnaire content and design, response options (such as the Internet), use of administrative records (on Internet and administrative record use, see Challenge 2), and targeted field data collection procedures and methodologies.

Conducting smaller tests in ACS and perhaps other surveys (such as the Current Population Survey) and special censuses could also facilitate the introduction of new technologies for the 2020 decennial. This would provide the Census Bureau a greater opportunity to evaluate new technology in the field before the decennial census, as well as pave the way for the bureau to use decennial technology in other surveys and thus amortize the necessarily large IT investments over a number of programs—rather than building systems for one-time use.

Although we advocate a series of smaller tests throughout the decade, we also believe it is ultimately important for the bureau to conduct a large-scale test that assesses the functionality of the major operations and IT systems to validate that these components work together as intended in an operational environment. If possible, the bureau should conduct this large-scale operational test earlier in the decade, in order to provide more time to solve problems and make improvements before the start of 2020 decennial operations.

**Challenge 4: Effectively Automate Field Data Collection**

Leading up to the 2010 decennial, Census planned to reduce field operations costs by using inexpensive, mobile, handheld computing devices—equipped with global positioning system capabilities—to automate the workload assignment, data collection, and information processing functions. If executed well, automation held the promise of reducing labor costs, improving quality, and enhancing operational efficiency.

In 2006, the Census Bureau awarded a $595 million field data collection automation (FDCA) contract for the development of more than a half million handheld computers. However, the



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project experienced constant setbacks, including technical problems, escalating costs, and missed deadlines. Poor performance in the 2007 address canvassing dress rehearsal exacerbated concerns that the handhelds would not be ready in time. Census regional offices, responsible for the massive decennial data collection operation, would be particularly affected and expressed major concerns about the change to an automated field data collection process.

In April 2008, the decision was made to abandon use of the handhelds for nonresponse followup so that the bureau and contractor could focus on improving the handhelds for the following year's decennial address canvassing operation. This change necessitated hasty preparations to make this nearly $2 billion operation paper-based.

The principal explanation for the significant problems the bureau encountered was the failure of senior bureau managers in place at the time to anticipate the complex IT requirements involved in automating the decennial. Census had originally intended to develop the handhelds in-house and tested prototypes in both the 2004 and 2006 site tests. However, the devices posed serious technical problems in both tests. Based on the 2004 test, the bureau decided to contract for automation of field operations, but by then it was late in the decade to plan and implement a complex acquisition that could meet ambitious fixed deadlines for the dress rehearsal tests starting in 2007 and decennial operations starting in 2009. After contract award, the bureau's requirements remained in flux.

It was not until January 2008—nearly 2 years after contract award—that the bureau finally delivered a first draft of a complete, user-validated set of requirements for the handhelds and supporting infrastructure. It had no contingency plan in the event the handhelds proved unusable. The problems experienced in developing the handhelds and the need to revert to paper-based operations for all but address canvassing so close to the start of the decennial introduced a high degree of risk into nonresponse followup and other operations.

Automating field data collection—to replace the millions of paper forms and maps that enumerators carry and reduce forms processing—remains a viable goal for 2020. However, based on the 2010 experience, Census must change its approach to planning, managing, and overseeing complex IT acquisitions including making improvements in the following areas:

- *Requirements development.* The bureau did not successfully convey the IT system requirements to its contractor or collaborate effectively to ensure the contractor fully understood the requirements. Weaknesses in requirements specifications and collaboration, along with poor financial planning, caused the FDCA contract to increase by nearly $200 million while delivering far less capability than planned. This is not a new problem: during our oversight of the 2000 decennial, we reported that inadequate control of requirements disrupted the development of the data capture system and caused major cost growth. Census must establish an effective process for defining and controlling requirements.

- *Cost estimation and budgeting.* At the time the FDCA contract was awarded, funding requests were significantly less than what the project would cost based on the bureau's own analysis. According to bureau documentation, for the first 6 months of the contract—when having adequate resources for planning, requirements analysis, and design was critical—the project had approximately half the needed funding, leading to



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the first of several replanning efforts. Moreover, as requirements changed, the bureau did not incorporate the resulting cost increases into project cost and budget estimates. For 2020 decennial acquisitions, the bureau should develop well-substantiated cost estimates, promptly determine the cost impacts of requirements and other changes, update project cost estimates and budget requests accordingly, and ensure that sufficient funds are available in project budgets.

- *Independent assessments.* Until late in the development process, key stakeholders remained unaware of the serious problems with the FDCA contract. Independent reviews—performed by experts not under the supervision, direction, or control of the program—can provide the Census Bureau, Department of Commerce, and other stakeholders with an objective second opinion on cost, schedule, and technical progress and critical issues.

- *Field participation.* Effectively introducing new technology for field operations means re-engineering longstanding business processes and requires the solid support of the regional offices, which have responsibility for conducting the decennial field operations. The bifurcated structure of the decennial—with the bulk of planning at headquarters but responsibility for the fieldwork in the regions—makes this a significant challenge. With ultimate responsibility for overseeing the enumerators knocking on doors and collecting information, regional Census staff must be integrally involved in and supportive of automation efforts.

- *Transparency and oversight.* An analysis conducted in 2004 by a bureau contractor indicated that the scope of FDCA carried a high risk. The Department lacked an effective oversight function and did not successfully address the high-risk nature of the acquisition. For 2020, Departmental oversight beginning early in the acquisition process and at key milestones is essential. If performed well, oversight can reveal, early in the process, whether the bureau has considered all reasonable project alternatives—and whether it is assuming too much risk. In this way, the Department can work with the bureau to address problems before unnecessary costs accumulate. Supported by early independent cost estimates and independent assessments, Department oversight can play a critical role in ensuring decennial IT investments stay on track.

For the 2010 decennial, the Census Bureau tried to contain costs by automating the largest, most costly decennial operations. Unfortunately, it lacked the knowledge and experience to manage and implement the large, complex IT acquisition that was necessary to do so. Census must shore up its IT acquisition processes early in the decade to prepare for successfully implementing an automated data collection solution for nonresponse followup, as well as the other doorstep operations.

**Challenge 5: Avoid Massive End-of-Decade Field Operation Through Continuous Updating of Address Lists and Maps**

The Census Bureau describes "an accurate, comprehensive, and timely [address] list" as "one of the best predictors of a successful census." If the list is incomplete or inaccurate, people may be missed or counted more than once. Errors in the bureau's master address file (MAF) can also



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increase costs, and the public burden, by requiring visits to nonexistent or duplicate locations in nonresponse followup.

Because the Census Bureau enumerates the population for the purposes of apportionment, redistricting, and distribution of federal funds, all addresses in the decennial census must be associated with a geographic location. The bureau attempts to locate all MAF addresses spatially in its nationwide automated geographic system (called the Topologically Integrated Geographic Encoding and Referencing system, or TIGER). Throughout the last decade, the bureau updated the MAF/TIGER database through a limited number of automated, clerical, and field operations.

Over the decade, the bureau also implemented a major initiative to align all street features to GPS map coordinates. Although this resulted in significant accuracy improvements to the maps, the bureau cancelled further operations mid-decade to fund the escalating field data collection automation costs. Meanwhile, some of the early decade accomplishments would not have reflected new housing developments and future roads, necessitating updating during address canvassing.

In preparation for the 2010 enumeration, the bureau conducted a massive address canvassing operation in spring 2009. During this operation, nearly 160,000 temporary employees were instructed to walk every street of the country to update the maps and address list according to specified protocols.

Address canvassing was costly, totaling $444 million and running nearly 25 percent over budget. It was also error-prone: our extensive field observations during address canvassing revealed that the temporary workforce hired for this mammoth task did not consistently draw roads or locate housing units accurately on maps. While address canvassing was underway, we reported that listers were not following important procedures. The bureau responded quickly to this finding by communicating to field staff and regional directors about the issue. However, by that point, many areas had completed production. Our observations and analysis of later operations confirmed numerous map and address list problems.

The issues we identified in 2010 address canvassing were not surprising. We have communicated longstanding concerns about the efficacy and cost effectiveness of this operation to the Census Bureau. For example, following the address canvassing operation in the 2000 Census, we made numerous recommendations aimed at improving Census's strategy for updating the MAF.

Subsequently, after the 2006 site test of address canvassing, we recommended that the bureau perform an analysis of the costs and benefits of 100 percent address canvassing and consider whether alternative, less costly strategies for developing the address list for the 2010 decennial were feasible. The bureau responded that anything less than 100 percent address canvassing was unacceptable. A 2004 report by the National Research Council similarly called for more analysis of the necessity of conducting a complete address canvassing operation and questioned the cost-benefit of this decision, stating that Census should justify why selective targeting of areas for address canvassing is either infeasible or inadequate—and how the costs of the complete canvass square with the benefits.

The Census Bureau now plans to update the address list and maps continuously throughout the decade and consider three address canvassing options for the 2020 decennial—full, targeted, and



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no additional address canvassing. The bureau should keep stakeholders apprised of its progress on continuous updating and should maintain transparency into its decision making regarding the extent of address canvassing that will be implemented at the end of the decade. This decision should be supported by relevant research data and cost-benefit analysis.

**Challenge 6: Implement Improved Project Planning and Management Techniques Early in the Decade**

The Census Bureau describes the decennial census as the nation's largest peacetime mobilization. For the 2010 Census, the bureau planned, managed, and tracked over 9,000 activities spanning several years and representing 44 major operations. Census identified more than two dozen major program risks, each requiring program monitoring and contingency plan development. Effective project planning and management are particularly critical not only to allay major cost growth but also to meet the immovable decennial deadline with accurate results: by law, the bureau must deliver apportionment counts to the president within 9 months of the census date, which in recent years equates to the last day of the decennial year.

To meet this deadline, the bureau must have a well-defined decennial plan—with consistent task plans, schedules, and cost estimates. Initially, the plan will necessarily be preliminary and should identify various alternative designs. As the bureau assesses alternatives and design, cost, and budget information solidifies, it should establish the baseline plan and refine the details. Despite the scale of the bureau's planning effort and its gains in project management as compared to 2000, our quarterly reports to Congress since August 2009 have identified significant problems in project planning and risk management that Census must resolve to help achieve cost containment and meet the 2020 Census schedule.

Specifically, the bureau did not use key project management best practices in planning and managing the 2010 decennial. It did not (1) ensure that all applicable tasks were entered into its project management system; (2) provide a consistent level of detail for all tasks; (3) verify, up front, the correctness of all start and end dates entered; and (4) use its project management system to track the cost of performing each task. The bureau therefore had incomplete and unreliable information for monitoring progress.

Without complete and accurate schedule information, the Census Bureau could not calculate the decennial's critical path—the set of activities having the longest path through the schedule—leaving the bureau unable to assess the impact on the overall schedule of delays in these tasks. To compensate, Census developed a list of separate critical activities based on management judgment and updated it weekly; however, in some cases, inaccurate scheduling information weakened the list's reliability as a management tool.

Having omitted key data from its project management system, the bureau could not link the cost, schedule, and progress of tasks—and therefore could not fully assess the likely impact on the final decennial cost of variances in the cost and schedule of individual tasks. This approach, called earned value management, is required by OMB on major investment projects and is a best practice because it can alert management to potential problems sooner than data on expenditures examined alone.



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In addition, the schedule did not account for the entire decade of work leading up to the decennial. Lack of a full lifecycle schedule contributed to many of the problems we identified with the 2010 testing strategy—for example, not enough time was allotted for test results to inform future testing (see Challenge 3). We support the bureau in its steps to create a lifecycle schedule for the 2020 Census.

Although the bureau's 2010 risk management program represented a significant improvement over the previous decennial census, disciplined risk identification and contingency planning occurred late in the decade. In fact, two contingency plans remained incomplete even as decennial operations ended.

By employing best practices for program and risk management early in the decennial cycle, and following through during the decade, the bureau can achieve a more effective planning and management process. While the bureau's project management system had the capability to support these practices, the system was not fully utilized for 2010. Census needs to improve how it uses its project management system in order to obtain accurate, reliable, and complete data for decennial planning and oversight.

Establishing uniform processes to develop the baseline schedule early—and integrate it with budget, cost, and contract information—will help provide the bureau objective management information. For the 2020 decennial, the bureau should implement appropriate risk management from the outset and finalize contingency plans prior to the start of decennial operations. These improvements will provide more reliable information to Census management and stakeholders; promote transparency in decennial planning, management, and oversight; help contain risk and cost; and reduce the likelihood of late-decade budget request increases in the 2020 decennial.

The bureau acknowledges the need to improve project management and is taking actions to establish a program management office under the proposed 2020 decennial directorate. Early discussions indicate the office will lead and document the strategy for schedule, budget, acquisition, performance management, and risk management that will ideally address management weaknesses from the 2010 decennial.

**Challenge 7: Establish a Census Bureau Director Position That Spans Administrations**

In our 2008 OIG *Top Management Challenges* report, we described the Census Bureau—particularly headquarters—as an insular organization that eschews open dialogue with outside parties and even its own regional operations. Considerable progress toward changing the culture has been made since that time, but leadership continuity is essential to maintain momentum as planning begins for the 2020 decennial. Absent stable, committed leadership, any organization tends to revert to its embedded culture. Because of the long planning cycle for the decennial, it is particularly critical that one individual be able to set the direction and lead the Census Bureau according to a consistent vision.

Such leadership continuity has not been the hallmark of previous decennial census cycles. For example, there have been six Census Bureau directors—two of them acting—responsible for the 2010 Census throughout its lifecycle. And, as shown in figure 5, the current director was appointed less than 9 months before Census Day (April 1). Similarly, the 2000 decennial lifecycle saw 5 directors, two of them acting. Census leadership usually changes when new



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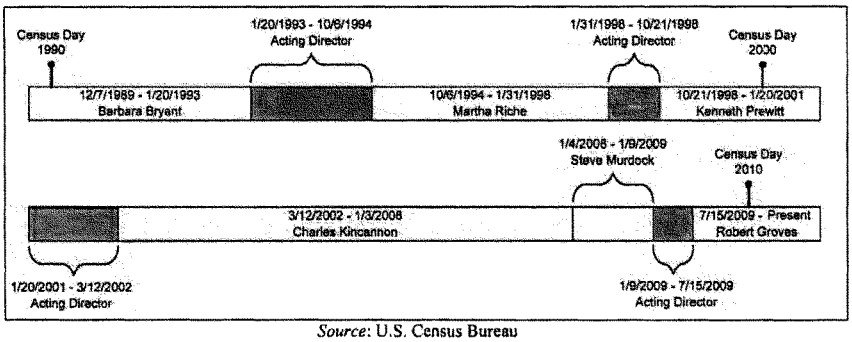
administrations take office, and the transition frequently entails a long nomination and confirmation process. Leadership voids may well occur when critical decisions (such as those involving budget, operational design, and questionnaire content) affecting the next decennial census must take place.

Figure 5. **Tenure of Census Bureau Directors, 1989–Present**




*Source*: U.S. Census Bureau

A solution considered in 2010 by the 111th Congress was to implement a fixed term for the Census Bureau director, staggered to begin and end in such a way as to minimize disruption to decennial planning, testing, and implementation. A leadership structure that promotes tenure can advance needed change and help the bureau recognize when to retire outdated methods, implement new methods with greater success—and reap the potential benefits of innovation.

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In conclusion, Mr. Chairman, the Census Bureau must make fundamental changes to its decennial census design and substantially strengthen the planning, implementation, and management of this enormous operation—the escalating cost over the decades has become unsustainable. In the decade's early years, the bureau will make key decisions that will set the course for how effectively and efficiently the 2020 count is performed and how much it will ultimately cost.

The bureau has embarked on this effort with an acknowledgment of the key deficiencies in 2010 decennial planning, a preliminary definition of approaches aimed at overcoming these weaknesses, and an unprecedented level of transparency. We encourage the bureau to continue along this path. But we have seen ambitious plans for other decennials give way in the face of management, technical, and fiscal difficulties. Continued focus and engagement will be needed throughout the decade by the Department of Commerce, Census Bureau, OMB, and Congress to help ensure that the promise of better technology, methods, and operations are realized in the 2020 Census.

This concludes my prepared statement, and I will be pleased to respond to any questions you or other subcommittee members may have.



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Testimony before the Subcommittee on Federal Financial Management, Government Information, Federal Services, and International Security, Committee on Homeland Security and Governmental Affairs, U.S. Senate

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# 2010 CENSUS

# Preliminary Lessons Learned Highlight the Need for Fundamental Reforms

Statement of Robert Goldenkoff
Director
Strategic Issues

GAO-11-496T

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# Highlights

Highlights of GAO-11-496T, a testimony before the Subcommittee on Federal Financial Management, Government Information, Federal Services, and International Security, Committee on Homeland Security and Governmental Affairs, U.S. Senate

April 6, 2011

# 2010 CENSUS

## Preliminary Lessons Learned Highlight the Need for Fundamental Reforms

### Why GAO Did This Study

GAO added the 2010 Census to its list of high-risk programs in 2008 in part because of (1) long-standing weaknesses in the Census Bureau's (Bureau) information technology (IT) acquisition and contract management function, (2) difficulties in developing reliable life-cycle cost estimates, and (3) key operations that were not tested under operational conditions. These issues jeopardized the Bureau's readiness for the count. Moreover, societal trends, such as concerns over privacy, have made a cost-effective census an increasingly difficult challenge. At about $13 billion, 2010 was the costliest U.S. Census in history. As requested, this testimony focuses on lessons learned from the 2010 Census, and initiatives that show promise for producing a more cost-effective population count in 2020. This testimony is based on completed and ongoing work, including an analysis of Bureau documents, interviews with Bureau officials, and field observations of census operations in urban and rural locations across the country.

### What GAO Recommends

GAO is not making new recommendations in this testimony, but past reports recommended that the Bureau strengthen its testing of key IT systems, better document and update its cost estimates, and develop an operational plan that integrates performance, budget, and other information. The Bureau generally agreed with GAO's findings and recommendations and is taking steps to implement them.

View GAO-11-496T or key components. For more information, contact Robert Goldenkoff at (202) 512-2757 or goldenkoffr@gao.gov

### What GAO Found

In February 2011, GAO removed the 2010 Census from its High-Risk List because the Bureau generally completed its peak enumeration activities and released congressional apportionment and redistricting data consistent with its operational plans. The Bureau improved its readiness for the census by strengthening its risk management activities, enhancing systems testing, and meeting regularly with executives from its parent agency, the Department of Commerce. Strong congressional oversight was also critical. Still, the 2010 Census required an unprecedented commitment of resources, and the cost of enumerating each housing unit has escalated from around $16 in 1970, to around $98 in 2010, in constant 2010 dollars. Based on the results of the 2010 and prior censuses, the following four early lessons learned could help secure a more cost-effective enumeration in 2020:

1. **Reexamine the Nation's Approach to Taking the Census:** The Bureau has used a similar approach to count most of the population since 1970. However, the approach has not kept pace with changes to society. Moving forward, it will be important for the Bureau to rethink its approach to planning, testing, implementing, and monitoring the census to address long-standing challenges.

2. **Assess and Refine Existing Operations Focusing on Tailoring Them to Specific Locations and Population Groups:** The Bureau plans to complete over 70 studies of the 2010 Census covering such topics as the Bureau's publicity efforts and field operations. As this research is completed, it will be important for it to assess the value-added of a particular operation in order for it to determine how best to allocate its resources for 2020.

3. **Institutionalize Efforts to Address High-Risk Areas:** Focus areas include incorporating best practices for IT acquisition management; developing reliable cost estimates; and ensuring key operations are fully tested, in part by developing clearly stated research objectives, a thoroughly documented data collection strategy, and methods for determining the extent to which specific activities contributed to controlling costs and enhancing quality

4. **Ensure that the Bureau's Management, Culture, and Business Practices Align with a Cost-Effective Enumeration:** The Bureau will need to ensure that its organizational culture and structure, as well as its approach to strategic planning, human capital management, collaboration, and other internal functions are focused on delivering more cost-effective outcomes.

The Bureau has launched an ambitious planning program for 2020. As these actions gain momentum, it will be important that they enhance the Bureau's capacity to control costs, ensure quality, and adapt to future technological and societal changes.



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Chairman Carper, Ranking Member Brown, and Members of the Subcommittee:

I am pleased to be here today to discuss planning efforts for the 2020 Census. The next enumeration might seem far over the horizon, but our reviews of the 1990, 2000, and now 2010 Censuses have shown that early planning and strong congressional oversight can help reduce the costs and risks of the national headcount. As you know, because of societal trends, including an increasingly diverse population and concerns over personal privacy, a cost-effective census has become inherently difficult. Going forward, the singular challenge facing the U.S. Census Bureau (Bureau) is how best to control the cost of future enumerations while maintaining their accuracy.

This afternoon's hearing is especially timely. Just one year after Census Day 2010, and with Census Day 2020 still 9 years down the road, today's session provides an early and important opportunity to look back on the lessons learned from the recent enumeration while simultaneously kicking off the congressional oversight necessary to help ensure the reforms needed for the next enumeration proceed on track. Indeed, past experience has shown that strong and continuing congressional involvement—especially while there is still time to make decisions and influence the direction of the census—is essential to the decennial's ultimate success.

Moreover, the fundamental design of the enumeration—mail out and mail back of the census form with in-person follow-up for nonrespondents—has been in use since 1970, and suffers from declining response rates. In short, this approach is no longer capable of cost-effectively counting a population that is growing steadily larger, more diverse, increasingly difficult to find, and reluctant to participate in the census. Much like going up a down escalator, over the past 40 years, the Bureau has been investing substantially more resources each decade in an effort to keep pace with key results from prior enumerations. The 2010 Census, at around $13 billion, was the most expensive headcount in our nation's history. Meanwhile, the cost of conducting the census has, on average, nearly doubled each decade since 1970 in constant 2010 dollars. If that growth rate continues unchecked, we could be looking at spending more than $25 billion on the 2020 Census.

Early and focused attention is also needed because the census—a constitutionally mandated effort—is critical to our nation, as the results are used to apportion seats in Congress, redraw congressional districts,



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help allocate more than $400 billion in federal aid to state and local governments each year, and remake local political boundaries. Census data are also used for investment decisions by the public and private sectors. Unfortunately, the Bureau's planning efforts for the last 3 decennials fell short, which resulted in operational challenges that jeopardized a successful census. The magnitude of these problems led us to add the 2000 and 2010 Censuses to our list of high-risk federal programs in 1997 and 2008.[1]

In 2008, for example, we designated the 2010 Census a GAO high-risk area because (1) long-standing weaknesses in the Bureau's information technology (IT) acquisition and contract management function, (2) difficulties in developing reliable life-cycle cost estimates, and (3) key operations that were not tested under operational conditions, all jeopardized a cost-effective enumeration.[2]

In February 2011, we removed the 2010 Census from the High-Risk List because the Bureau generally completed its peak census data collection activities consistent with its operational plans; released the state population counts used to apportion Congress on December 21, 2010, several days ahead of the legally mandated end-of-year deadline; and remaining activities appeared to be on track. More recently, on March 24, 2011, the Bureau announced it had completed the release of data that states use to redraw federal, state, and local legislative districts.

In removing the 2010 Census from our High-Risk List we noted that the Bureau improved its readiness for the census by taking such steps as strengthening its risk management activities, enhancing systems testing, bringing in experienced personnel to key positions, implementing our prior recommendations, and meeting regularly with executives from its parent agency, the Department of Commerce.[3] Importantly, we removed the high-risk designation because of the Bureau's strong commitment to, and top leadership support for addressing problems; boosting its capacity

[1]GAO, *High Risk Series: Quick Reference Guide*, GAO/HR-97-2 (Washington, D.C., Feb. 1, 1997), and GAO, *Information Technology: Significant Problems of Critical Automation Program Contribute to Risks Facing 2010 Census*, GAO-08-550T (Washington, D.C.: Mar. 5, 2008).

[2]High-risk areas are areas GAO has called special attention to because of their vulnerability to mismanagement or their broad need for reform. GAO-08-550T.

[3]GAO, *High-Risk Series: An Update*, GAO-11-278 (Washington, D.C.: February 2011).



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to address shortcomings; and developing a corrective action plan, among other actions, and not simply because the census was coming to a close. Moreover, active congressional oversight—including 12 hearings convened by the House and Senate since we first named the 2010 Census a high-risk area—helped ensure the Bureau effectively designed and managed operations and kept the enumeration on schedule. The operational success of the 2010 Census is also a tremendous credit to the hundreds of thousands of career and temporary Bureau employees who diligently implemented a vast array of census-taking activities, often under difficult circumstances; and to the public, private, tribal, and nonprofit organizations of all sizes that voluntarily partnered with the Bureau and raised awareness of the census.

Going forward, while 2020 might seem distant, several issues suggest that it is not too early for stakeholders to start considering the improvements necessary to make the next national headcount as cost-effective as possible. These issues include: (1) the scope of the reforms needed, (2) the amount of taxpayer dollars at stake, (3) the criticality of a successful count, and (4) the Bureau's past planning difficulties. As requested, my remarks today will focus on lessons learned from the 2010 Census, and initiatives that show promise for producing an accurate and cost-effective population count in 2020.

In summary, while still assessing its conduct of the 2010 Census, as the Bureau continues its planning efforts for 2020, it will be essential for it to address the following four lessons learned:

- reexamine and perhaps fundamentally transform the way the Bureau plans, tests, implements, monitors, and evaluates future enumerations;
- assess and refine existing census-taking operations with an eye toward tailoring them to specific geographic areas and population groups;
- continue to address those shortcomings that led us to designate the 2010 Census a high-risk area including following key practices important for managing IT and strengthening its ability to develop reliable life-cycle cost estimates; and
- ensure that the Bureau's management, culture, business practices, and automated systems are all aligned with a cost-effective enumeration.

While the Bureau needs to do all of this and more, an additional lesson learned is that the Bureau cannot achieve a successful census on its own.



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Rather, the enumeration is a shared national undertaking where federal agencies, state, local, and tribal governments, nonprofit and private organizations, and ultimately the public at large, all have vital roles to play. Congress too, has an essential responsibility. As was underscored by the 2010 experience, House and Senate involvement was essential for obtaining regular updates on the Bureau's progress in addressing the operational challenges it was facing, helping to hold the agency accountable for results, and providing the Bureau with resources needed to conduct a successful population count. Today's hearing, Mr. Chairman, builds on these past efforts, and will help ensure that lessons learned are documented and acted upon in the years ahead, raise Congress's confidence that the Bureau has learned from 2010, and that the journey toward 2020 continues in the right direction.

My testimony today is based on our completed work related to key 2010 operations and the Bureau's planning efforts for 2020,[4] as well as, ongoing work that is focused on 2010 Census cost drivers and the 2020 life-cycle cost estimate. For both completed and ongoing work we analyzed key documents such as, budgets, plans, procedures, and guidance for the selected activities; and interviewed cognizant Bureau officials at headquarters and local census offices. In addition, for our completed work, we made on-site observations of key census-taking activities across the country including such urban locations as Los Angeles, California; Atlanta, Georgia; Philadelphia, Pennsylvania; Brooklyn, New York; New Orleans, Louisiana; and Washington, D.C., as well as such less populated areas as Meridian, Mississippi, and New Castle, Delaware. We selected these locations because of their geographic and demographic diversity, among other factors. To obtain information on various management and organizational reforms that could help the Bureau become more accountable and results oriented, we reviewed our prior work on governmentwide reexamination, as well as leading practices and attributes in the areas of IT management, organizational performance, collaboration,

[4]See related GAO products at the end of this statement.



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stewardship, and human capital.[6] More detail on our scope and methodology is provided in each issued product.

On March 18, 2011, we provided the Bureau with a statement of facts related to the information included in this statement, and Bureau officials provided technical comments, which we included as appropriate. We conducted our work in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audits to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

## Background

In conducting the 2010 Census, the Bureau encountered two sets of challenges: internal management challenges that affected the Bureau's overall readiness and led us to designate the 2010 Census as a high-risk area, as well as external sociodemographic challenges such as more non-English speakers and people residing in makeshift and other nontraditional living arrangements. As shown in figure 1, the cost of enumerating each housing unit has escalated from around $16 in 1970, to around $98 in 2010, in constant 2010 dollars (an increase of over 500 percent). At the same time, the mail response rate—a key indicator of a cost-effective census—has declined from 78 percent in 1970 to 63 percent in 2010. In many ways, the Bureau has been investing substantially more resources each decade just to try and match the results of prior enumerations.

[6]See for example: GAO, *Information Technology Investment Management: A Framework for Assessing and Improving Process Maturity*, GAO-04-394G (Washington, D.C.: March 2004); Comptroller General's Forum, *High-Performing Organizations: Metrics, Means, and Mechanisms for Achieving High Performance in the 21st Century Public Management Environment*, GAO-04-343SP (Washington, D.C.: Feb. 13, 2004); *Results-Oriented Government: Practices That Can Help Enhance and Sustain Collaboration among Federal Agencies*, GAO-06-15, (Washington, D.C.: Oct. 21, 2005); *21st Century Challenges: Reexamining the Base of the Federal Government*, GAO-05-325SP (Washington, D.C.: February 2005); and *Human Capital: Key Principles for Effective Strategic Workforce Planning*, GAO-04-39 (Washington, D.C.: Dec. 11, 2003).



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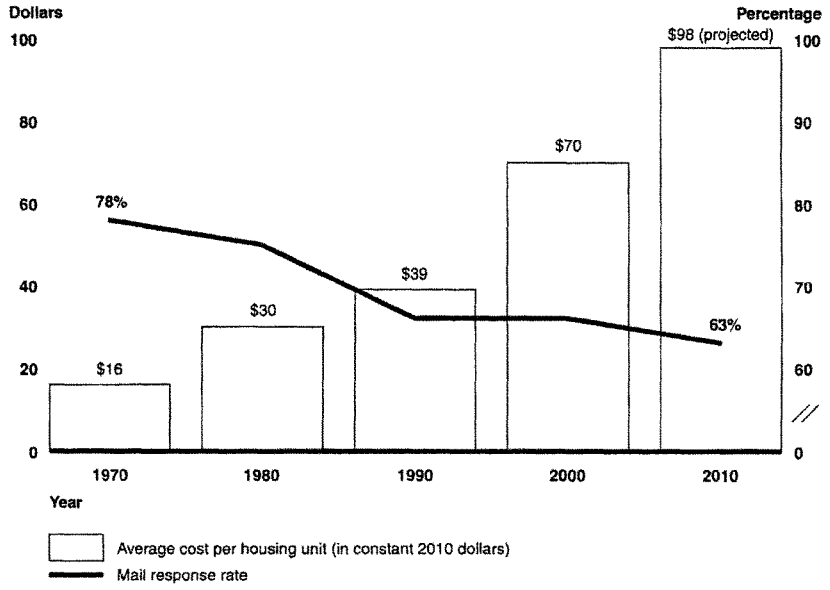
**Figure 1: The Average Cost of Counting Each Housing Unit (in Constant 2010 Dollars) Has Escalated Each Decade, While Mail Response Rates Have Declined**




Source: GAO analysis of Census Bureau data.

Note: In the 2010 Census the Bureau used only a short-form questionnaire. For this statement, we use the 1990 and 2000 Census short-form mail response rate when comparing 1990, 2000, and 2010 mail-back response rates. Census short-form mail response rates are unavailable for 1970 and 1980, so we use the overall response rate.



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Beginning in 1990, we reported that rising costs, difficulties in securing public participation, and other long-standing challenges required a revised census methodology—a view that was shared by other stakeholders.[6] Achieving acceptable results using these conventional methods has required an increasingly larger investment of fiscal resources, which in the coming years will likely become scarcer.

Indeed, the 2010 Census required an unprecedented commitment of resources, including recruiting more than 3.8 million total applicants—roughly equivalent to the entire population of Oklahoma—for its temporary workforce; and rose in cost from an initial estimate of $11.3 billion in 2001 to around $13 billion. According to the Bureau, several factors were largely behind the escalating costs of the 2010 Census including (1) a flawed acquisition strategy, (2) the need to hire a large number of field staff to enumerate people who did not mail back their census forms, and (3) substantial investments in updating the Bureau's address list just prior to the start of the enumeration.

## Lesson Learned #1: Reexamine the Nation's Approach to Taking the Census

The results of prior enumerations underscore the fact that simply refining current methods—some of which have been in place for decades—will not bring about the reforms needed to control costs while maintaining accuracy given ongoing and newly emerging societal trends. Since 1970, the Bureau has used a similar approach to count the vast majority of the population. For example, the Bureau develops an address list of the nation's housing units and mails census forms to each one for occupants to complete and send back. Over time, because of demographic and attitudinal trends, securing an acceptable response rate has become an increasing challenge. Our concerns about the rising cost and diminishing returns of the census are not new. In the mid-1990s, for example, we and others concluded that the established approach for taking the census had exhausted its potential for counting the population cost-effectively and that fundamental design changes were needed to reduce census costs and improve the quality of data collected.[7]

[6]See for example, GAO, *Decennial Census: Preliminary 1990 Lessons Learned Indicate Need to Rethink Census Approach*, GAO/T-GGD-90-18 (Washington, D.C.: Aug. 8, 1990); and *2000 Census: Progress Made on Design, but Risks Remain*, GAO/GGD-97-142 (Washington, D.C.: July 14, 1997).

[7]GAO/GGD-97-142.



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A fundamental reexamination of the nation's approach to the census will require the Bureau to rethink its approach to planning, testing, implementing, monitoring, and evaluating the census, and addressing such questions as: Why was a certain program initiated? What was the intended goal? Have significant changes occurred that affect its purpose? Does it use prevailing leading practices?

Our December 2010 report noted potential focus areas for such a reexamination. These include better leveraging innovations in technology and social media to more fully engage census stakeholders and the general public on census issues; and reaching agreement on a set of criteria that could be used to weigh the trade-offs associated with the need for high levels of accuracy on the one hand, and the increasing cost of achieving that accuracy on the other hand.[8]

One of the areas that the Bureau would like to leverage for the 2020 Census is the use of an Internet response option. The Bureau provided the opportunity for respondents to complete the 2000 Census short forms on the Internet—protected by a 22-digit identification number. According to Bureau officials, for the 2000 Census, about 60,000 short forms were completed via the Internet. The Bureau originally planned to include the Internet in the 2010 Census, but then decided not to, because the benefits gained through processing less paper, as well as improvements to the quality of data, were outweighed by the cost of developing the Internet response option and the risks associated with the security of census data. To examine its use for the 2020 decennial census, the Bureau will need to review many of those same issues and address the following questions:

- To what extent could an Internet response option lower data collection costs for the Bureau?
- To what extent could an Internet response option increase the quality of data collected?
- To what extent does the use of an Internet response option pose a risk to the confidentiality of census data?

[8]GAO, *2010 Census: Data Collection Operations Were Generally Completed as Planned, but Long-standing Challenges Suggest Need for Fundamental Reforms*, GAO-11-193 (Washington, D.C.: Dec. 14, 2010).



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Moreover, given that the research, development, and testing efforts for 2020 will play out over the decade-long census life-cycle, what is the optimal way to ensure continuity and accountability for an enterprise that takes years to complete and extends beyond the tenure of many elected political leaders? The Director of the Census Bureau can, in concept, provide a measure of continuity, but of the 11 census directors who have served since July 1969 (not including the current director), the average tenure was around 3 years, and only 1 director has served more than 5 years. Further, in the decade leading up to the 2010 Census, the Bureau was led by 4 different directors and several acting directors. The turnover in the Bureau's chief executive officer position makes it difficult to develop and sustain efforts that foster change, produce results, mitigate risks, and control costs over the long term.

The heads of a number of executive agencies serve fixed appointments, based on Presidential nomination and Senate confirmation, including the Director of the Office of Personnel Management (4 years), the Commissioner of Labor Statistics (4 years), and the Commissioner of Internal Revenue (5 years). We believe that the continuity resulting from a fixed-term appointment could provide the following benefits to the Bureau:

- **Strategic vision.** The director needs to build a long-term vision for the Bureau that extends beyond the current decennial census. Strategic planning, human-capital succession planning, and life-cycle cost estimates for the Bureau all span the decade.
- **Sustaining stakeholder relationships.** The director needs to continually expand and develop working relationships and partnerships with governmental, political, and other professional officials in both the public and private sectors to obtain their input, support, and participation in the Bureau's activities.
- **Accountability.** The life-cycle cost for a decennial census spans a decade, and decisions made early in the decade about the next decennial census guide the research, investments, and tests carried out throughout the entire 10-year period. Institutionalizing accountability over an extended period may help long-term decennial initiatives provide meaningful and sustainable results.



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## Lesson Learned #2: Assess and Refine Existing Operations Focusing on Opportunities to Tailor Census-Taking Activities to Specific Locations and Population Groups

As noted earlier, a key indicator of a cost-effective census is the mail response rate, which is the percentage of all housing units in the mail-back universe, including those that are later found to be nonexistent or unoccupied. High response rates are essential because they save taxpayer dollars and ensure a more accurate enumeration. According to the Bureau, for every percentage point increase in mail response in 2010, the Bureau saved $85 million that would otherwise have been spent on in-person follow-up efforts. Also, according to the Bureau, it costs 42 cents to mail back each census form in a postage-paid envelope, compared with an average estimate of $57 for field activities necessary to enumerate each home in person. Moreover, mail returns tend to have better quality data, in part because as time goes on after Census Day (April 1), people move, or may have difficulty recalling who was residing with them.

For the 2010 Census, the Bureau expected a response rate of 59 percent to 65 percent. The actual mail response rate on April 19 when the Bureau initially determined the universe of houses to visit for nonresponse follow-up (NRFU)[9] was just over 63 percent, well within the Bureau's range of estimates. Achieving this response rate was an important accomplishment given the nation's increasing diversity.

As illustrated in figure 2, the Bureau met its expected response rate in all but 11 states. The highest response rate (71.7 percent) was in Minnesota, while the lowest response rate (51 percent) was in Alaska. At the same time, response rates in all but 2 states—Hawaii and South Carolina—as well as the District of Columbia, declined anywhere from 0.8 to 8.2 percentage points when compared to 2000, thus underscoring the difficulty the Bureau will face in the future in trying to sustain response rates.[10]

Key factors aimed at improving the mail response rate included the mailing of an advance letter and a reminder postcard, and an aggressive marketing and outreach program. In addition, this was the first census the Bureau sent a second or "replacement" questionnaire to households.

[9]NRFU is the largest and most costly census field operation, where the Bureau sends enumerators to collect data from households that did not mail back their census forms.

[10]In the 2000 Census, the Bureau used both long- and short-form questionnaires. The short-form questionnaire had a higher response rate because it had fewer questions. For the 2010 Census, the Bureau used only a short-form questionnaire. For this report we use the 2000 Census short-form mail response rate when comparing 2000 and 2010 mail-back response rates.



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Replacement questionnaires were sent to around 25 million households in census tracts that had the lowest response rates in the 2000 Census, and 10 million replacement questionnaires were sent to nonresponding households in other census tracts that had low-to-moderate response rates in 2000.



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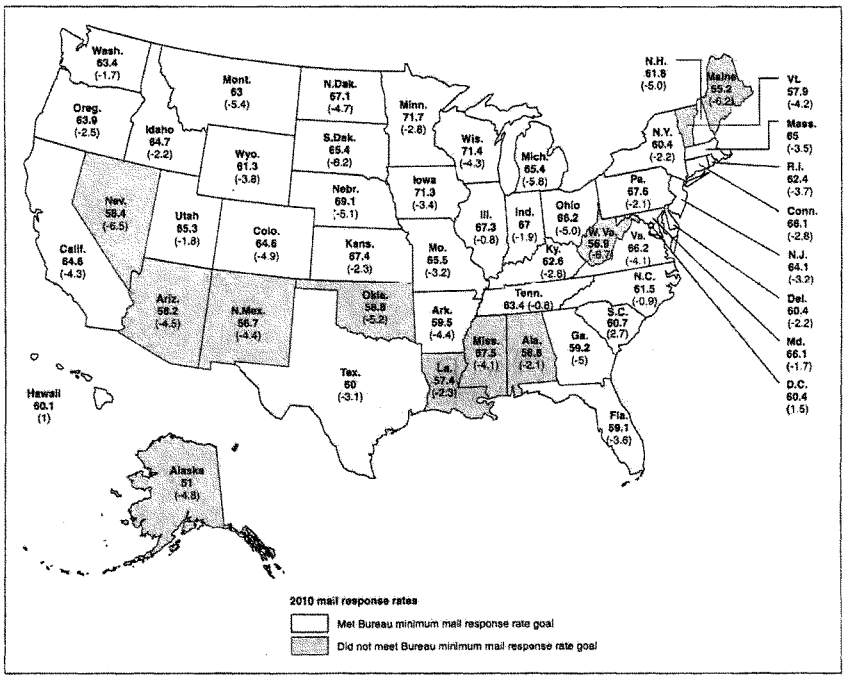
**Figure 2: The Bureau Met Its Minimum Mail Response Rate Goal of 59 Percent in All but 11 States, but Rates Generally Declined Compared to 2000**




Source: GAO analysis of preliminary Census Bureau data; Map Resources (map).

Note: Number in bold reflects the 2010 response rate as of April 19, 2010. Number below in parentheses reflects the percentage change in response rate from 2000 to 2010. The 2000 Census response rate is as of April 18, 2000.



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To determine if these and other census-taking activities were effective, the Bureau plans to complete over 70 studies covering such topics as marketing and publicity, field operations, privacy and confidentiality, and language barriers. Moreover, in July 2010, the Bureau developed a database for cataloging all recommendations from these 2010 studies, as well as recommendations from our office, the Department of Commerce Inspector General's Office, and the National Academy of Sciences, among others. According to a Bureau official, this database will allow the Bureau to link 2010 recommendations to 2020 research and testing, in an attempt to ensure that all recommendations coming out of 2010 are incorporated into 2020 research.

These studies of the 2010 Census are extremely important for informing decisions on the design of the 2020 Census. However, some will not be completed by fiscal year 2012, when the Bureau plans to start research and testing for the 2020 Census. Bureau officials said they will give priority to studies that align with the 2020 Census strategic plan.[11] In moving forward, it will be important for the Bureau to complete 2010 Census studies and stay on track to ensure that study results, where appropriate, are incorporated into 2020 research. As such, until all studies from the 2010 Census are finished, the Bureau will not have a complete picture of what worked well, or know what improvements are needed for 2020.

Moreover, in several of the programs we reviewed, assessments were not always focused on the value-added of a particular operation, such as the extent to which it reduced costs and/or enhanced data quality. This information would be useful for improving operations, identifying possible duplicative efforts, and identifying potential cost savings for 2020.

As one illustration, a complete and accurate address list, along with precise maps are the fundamental building blocks of a successful census. If the Bureau's address list, known as the Master Address File (MAF) and maps are inaccurate, people can be missed, counted more than once, or included in the wrong location. To build an accurate address list and maps, the Bureau conducted a number of operations throughout the decade, some of which were extremely labor-intensive. For example, the Bureau partnered with the U.S. Postal Service and other federal agencies; state, local, and tribal governments; local planning organizations; the

[11]The strategic plan for the 2020 Census defines the Census Bureau's mission and vision for 2020 and discusses the goals the Bureau will need to accomplish its mission.



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private sector; and nongovernmental entities. Moreover, the Bureau employed thousands of temporary census workers to walk every street in the country to locate and verify places where people could live, in an operation called address canvassing. Three additional activities were aimed at properly identifying and locating dormitories, nursing homes, prisons, and other group living arrangements known as "group quarters."

In a 2009 testimony, we noted that with the cost of counting each housing unit growing at a staggering rate, it is important for the Bureau to determine which of its multiple MAF-building operations provide the best return on investment in terms of contributing to accuracy and coverage.[12] A number of operations might be needed to help locate people residing in different types of living arrangements, as well as to ensure housing units missed in one operation get included in a subsequent operation. However, the extent to which each individual operation contributes to the overall accuracy of the MAF is uncertain. This in turn makes it difficult for the Bureau to fully assess the extent to which potential reforms such as reducing or consolidating the number of address-building operations, might affect the quality of the address list. As one example, while the Bureau plans study options for targeted address canvassing as an alternative to canvassing every street in the country, the Bureau's evaluation plan does not specify whether the Bureau will look across MAF-building activities and compare how each individual operation contributes to the overall accuracy and completeness of the address list and at what cost.

Leveraging such data as local response rates, census sociodemographic information, as well as other data sources and empirical evidence, might also help control costs and improve accuracy by providing information on ways the Bureau could more efficiently allocate its resources. For example, some neighborhoods might require a greater level of effort to achieve acceptable results, while in other areas, those same results might be accomplished with fewer resources.

To the extent the Bureau targeted various activities during the 2010 Census, initial indications suggest that those efforts went well. For example, the Bureau developed job aids to address location-specific training challenges. In one example, partly in response to our

[12]GAO, *2010 Census: Efforts to Build an Accurate Address List Are Making Progress, but Face Software and Other Challenges*, GAO-10-140T (Washington, D.C.: Oct. 21, 2009).



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recommendations, to help ensure the Bureau would develop an accurate address list in those areas affected by Hurricanes Katrina, Rita, and Ike, the Bureau developed supplemental training materials for natural disaster areas to help census workers identify less conventional places where people might be living such as homes marked for demolition, converted buses and recreational vehicles, and nonresidential space such as storage areas above restaurants.[12]

As another example, the Bureau budgeted around $297 million on paid media to raise awareness and encourage public participation in the census, about $57 million (24 percent) more than in 2000 in constant 2010 dollars. To determine where paid media efforts might have the greatest impact, the Bureau developed predictive models based on 2000 Census data and the evaluations of other efforts used for 2000. By better targeting paid media buys by area and message, the Bureau expected to more effectively reach those who have historically been the hardest to count. However, according to the Bureau, this modeling could have been more robust had the data from 2000 done a better job of isolating the impact of paid media from other components of the Bureau's outreach efforts, among other factors.

Simply put, the Bureau made important progress in using data to determine where to spend its resources. It will be important for the Bureau to expand on those efforts in 2020, as well as to develop information on the return on investment of key census operations.

## Lesson #3: Institutionalize Efforts to Address High-Risk Areas

A key priority for the Bureau will be to fully address those areas that led us to designate the 2010 Census a high-risk program. The problems the Bureau encountered in managing its IT systems, developing reliable life-cycle cost estimates, and testing key operations under census-like conditions were cross-cutting in that they affected a number of different activities, and thus threatened the Bureau's readiness for the census. The Bureau has taken steps to address these vulnerabilities. In the years ahead, it will be important for the Bureau to continue the progress it has made to date, and ensure that any changes are fully integrated into its basic business practices.

[12]GAO, *2010 Census: Census Bureau Has Improved the Local Update of Census Addresses Program, but Challenges Remain*, GAO-07-736 (Washington, D.C.: June 14, 2007).



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## Incorporate Best Practices for IT Acquisition Management

IT is critical to a successful census because it helps support the Bureau's data collection, analysis, and dissemination activities. However, the Bureau has had long-standing difficulties with the development and acquisition of automated systems. For example, during the 2000 Census, the Bureau had to grapple with untimely and inaccurate management information, a lack of mature and effective software and systems development processes, inadequate testing of key systems, inadequate security controls, and an insufficient number of experienced staff to manage expensive and complex system projects. Both we and the Department of Commerce Inspector General made a series of recommendations to address these issues, and the Bureau took steps to implement them. Still, problems reemerged during the run-up to the 2010 Census. For example, while the Bureau planned to use automation and technology to improve the coverage, accuracy, and efficiency of the 2010 Census, in June 2005, we noted that the Bureau had not fully implemented key practices important to managing IT, including investment management, system development and management, and enterprise architecture[14] management.[15] As a result, we concluded that the Bureau's IT investments were at increased risk of mismanagement, and were more likely to experience cost and schedule overruns and performance shortfalls.

As development of the IT systems progressed, these problems were realized. For example, the Field Data Collection Automation program, which included the development of handheld computers to collect information for address canvassing and NRFU, experienced substantial schedule delays and cost increases.[16] As a result, the Bureau later decided to abandon the planned use of handheld data-collection devices for NRFU

[14]A well-defined enterprise architecture provides a clear and comprehensive picture of an entity, whether it is an organization (e.g., a federal department) or a functional or mission area that cuts across more than one organization (e.g., personnel management). This picture consists of snapshots of both the enterprise's current or "As Is" environment and its target or "To Be" environment, as well as a capital-investment road map for transitioning from the current to the target environment.

[15]GAO, *Information Technology Management: Census Bureau Has Implemented Many Key Practices, but Additional Actions Are Needed*, GAO-05-661 (Washington, D.C.: June 16, 2005).

[16]GAO, *Census 2010: Census at Critical Juncture for Implementing Risk Reduction Strategies*, GAO-08-659T (Washington, D.C.: Apr. 9, 2008); *Information Technology: Census Bureau Needs to Improve Its Risk Management of Decennial Systems*, GAO-08-259T (Washington, D.C.: Dec. 11, 2007); and GAO-08-550T.



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and reverted to paper questionnaires. According to the Bureau, this change added between $2.2 and $3 billion to the total cost of the census.

The Bureau developed a new automated system to manage the paper-based approach, but the system experienced outages, slow performance, and problems generating and maintaining timely progress reports. Workarounds ultimately enabled the Bureau to successfully implement NRFU. However, the Bureau was still limited in its ability to effectively monitor productivity or implement quality-assurance procedures as documented in its operational plans.

Therefore, as the Bureau prepares for 2020, among other actions it will be important for it to continue to improve its ability to manage its IT investments. Leading up to the 2010 Census, we made numerous recommendations to the Bureau to improve its IT management procedures by implementing best practices in risk management, requirements development, and testing.[17] The Bureau implemented many of our recommendations, but not our broader recommendation to institutionalize these practices at the organizational level. The challenges experienced by the Bureau in acquiring and developing IT systems during the 2010 Census further demonstrate the importance of establishing and enforcing a rigorous IT acquisition management policy Bureau-wide. In addition, it will be important for the Bureau to improve its ability to consistently perform key IT management practices, such as IT investment management, system development and management, and enterprise architecture management. The effective use of these practices can better ensure that future IT investments will be pursued in a way that optimizes mission performance.

## Develop More Reliable Life-Cycle Cost Estimates

Accurate cost estimates are essential for a successful census because they help ensure that the Bureau has adequate funds and that Congress, the Administration, and the Bureau itself can have reliable information on which to base decisions. However, we noted in our 2008 report that the Bureau's cost estimate for the 2010 Census lacked detailed documentation on data sources and significant assumptions, and was not comprehensive

[17]See, for example, GAO-05-661; GAO, *Census Bureau: Important Activities for Improving Management of Key 2010 Decennial Acquisitions Remain to be Done*, GAO-06-444T (Washington, D.C.: Mar. 1, 2006); *Information Technology: Census Bureau Needs to Improve Its Risk Management of Decennial Systems*, GAO-08-79 (Washington, D.C.: Oct. 5, 2007); and *Information Technology: Census Bureau Testing of 2010 Decennial Systems Can Be Strengthened*, GAO-09-262 (Washington, D.C.: Mar. 5, 2009).



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because it did not include all costs.[18] We noted that the Bureau had insufficient policies and procedures, and inadequately trained staff for conducting high-quality cost estimation for the decennial census, and therefore recommended that the Bureau take a variety of steps to improve the credibility and accuracy of its cost estimates. Moreover, following best practices from our Cost Estimating and Assessment Guide, such as defining necessary resources and tasks, could have helped the Bureau generate more reliable cost estimates.[19]

Partly as a result of these issues, some operations had substantial variances between their initial cost estimates and their actual costs. For example, the Bureau initially estimated that NRFU would cost around $2.25 billion. However, by the end of the operation, the Bureau reported using approximately $1.59 billion, which was 29 percent lower than budgeted. At the same time, another operation—address canvassing—was around $88 million (25 percent) more than its initial budget of $356 million, according to a preliminary Bureau estimate.

Moving forward, it will be important for the Bureau to ensure the reliability of the 2020 cost estimate, and the Bureau has already taken several actions in that regard. For example, based on recommendations from our June 2008 report, Bureau officials have stated that some of their budget staff have been trained and certified in cost estimation. The Bureau also has started using the Decennial Budget Integration Tool (DBiT). According to the Bureau, once it has completed entering all needed budget data, DBiT will consolidate budget information and enable the Bureau to better document its cost estimates.

Further, as a part of its planning for 2020, Bureau officials said that they have developed and provided to the Office of Management and Budget (OMB) for its review a rough order of magnitude estimate for the 2020 Census—based on information at this early stage of 2020 planning. In addition, the Bureau plans to develop a range of full life-cycle cost estimates in fiscal year 2013. As noted in our cost estimating guide, a life-cycle cost estimate can be thought of as a "cradle to grave" approach to

[18]GAO, *2010 Census: Census Bureau Should Take Action to Improve the Credibility and Accuracy of Its Cost Estimate for the Decennial Census*, GAO-08-554 (Washington, D.C.: June 16, 2008).

[19]GAO, *GAO Cost Estimating And Assessment Guide: Best Practices for Developing and Managing Capital Program Costs*, GAO-09-3SP (Washington, D.C.: March 2009).



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managing a program throughout its useful life. Life-cycle costing enhances decision making, especially in early planning and concept formulation. Therefore, as the Bureau develops its estimates for 2020, it will be important for the Bureau to identify all cost elements that pertain to the program from initial concept all the way through operations and support.

Providing reliable cost estimates that are developed early in a project's life-cycle and accompanied by sound justification will be important in order for Congress to make informed decisions about the levels at which to fund future decennial censuses. More specifically, greater fiscal transparency, before committing to a final design and a particular level of spending, could help inform deliberations on the extent to which (1) the cost of the census is reasonable, (2) trade-offs will need to be made with competing national priorities, and (3) additional dollars spent on the census yield better results.

## Ensure Key Census-Taking Activities Are Fully Tested

The census can be seen as a large, complex, yet inherently fragile machine comprised of thousands of moving parts, all of which must function in concert with one another in order to secure a cost-effective count. In short, while the census is under way, the tolerance for any breakdowns is quite small. Given this difficult operating environment, rigorous testing is a critical risk mitigation strategy because it provides information on the feasibility and performance of individual census-taking activities, their potential for achieving desired results, and the extent to which they are able to function together under full operational conditions.

As the Bureau geared up for 2010, we expressed our concern about the testing of key IT systems and other census-taking activities. For example, partly because of the performance problems with the handheld computers noted earlier, the Bureau decided not to include two census operations (NRFU and Vacant/Delete Check) in the full dress rehearsal for the census that was scheduled for 2008.[20] In lieu of a full dress rehearsal, the Bureau tested individual components of the census in isolation. However, without a full dress rehearsal, the Bureau was unable to demonstrate that various enumeration activities could function under near-census-like conditions. Although the Bureau had performed many of these activities in previous censuses, some operations—such as mailing a second questionnaire to

[20]Vacant/Delete Check is an operation the Bureau conducts to verify the status of housing units flagged earlier in the census as being unoccupied or nonexistent.



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households that did not complete their census forms by a certain date, the removal of late mail returns, and fingerprinting hundreds of thousands of temporary census workers—were new for 2010 and introduced new operational risks. While the actual enumeration generally proceeded according to expectations, some operations, most notably the automated system that the Bureau developed to manage the paper-based NRFU operation noted earlier, were unable to function under operational loads in part because of a compressed testing schedule.

Moving forward, as the Bureau refines and implements its testing plans, our past work on census testing has shown that it will be important for its strategy to include, but not be limited to, these key components of a sound study:

- clearly stated objectives with accompanying performance measures;
- research questions linked to test objectives and, as appropriate, a clear rationale for why sites were selected for field tests;
- a thoroughly documented data collection strategy;
- input from stakeholders and lessons learned considered in developing test objectives; and
- a data analysis plan including, as appropriate, methods for determining the extent to which specific activities contribute to controlling costs and enhancing quality.[21]

While the Bureau does not plan to conduct its first major census test until April 2014, as part of its research and testing for 2020 the Bureau plans to conduct 26 tests in support of six different design alternatives between fiscal years 2012 and 2014. These design alternatives include, for example, improving the existing 2010 design, using administrative records for nonresponse follow-up, or increasing the number of available response options such as the Internet or cell phones. Key elements of the Bureau's research and testing strategy include:

[21]GAO, *2010 Census: Basic Design has Potential, but Remaining Challenges Need Prompt Resolution*, GAO-05-9 (Washington, D.C.: Jan. 12, 2005).



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- performing many small, focused field tests in lieu of a few large field tests as was the case for the 2010 Census;
- setting up a virtual Local Census Office at Census Bureau headquarters to test new census methods; and
- using the American Community Survey—an ongoing Bureau survey of population and housing characteristics that is administered throughout the decade—as a vehicle to test specific census methods.

These tests will be important for determining the feasibility of different design alternatives. We believe that given the number of tests and design alternatives that the Bureau plans to evaluate, it will be important to have a management structure in place for essential functions such as coordinating the tests; determining priorities; tracking the results; assessing their implications; weighing cost, accuracy, and other trade-offs; and ensuring that findings and recommendations are funneled to appropriate senior Bureau leadership for action.

## Lesson Learned #4: Ensure That the Bureau's Management, Culture, and Business Practices Are Aligned with a Cost-Effective Enumeration

On the basis of our earlier work on high-performing organizations, fundamental reforms will mean ensuring that the Bureau's organizational culture and structure, as well as its approach to strategic planning, human-capital management, internal collaboration, knowledge sharing, capital decision making, risk and change management, and other internal functions are aligned toward delivering more cost-effective outcomes.[22] Indeed, some of the operational problems that occurred during the 2010 and prior censuses are symptomatic of deeper organizational issues. For example, the lack of staff skilled in cost estimation during the 2010 Census points to inadequate human-capital planning, while, as noted above, IT problems stemmed from not fully and consistently performing certain functions including IT investment management.

Moreover, the Bureau's own assessment of its organization found that it has a number of strengths including a culture that is committed to accuracy, precision, objectivity, and the overall mission of the census, as well as a workforce that understands decennial operations, procedures, and critical subject matter. At the same time, the Bureau's assessment noted there were several areas for improvement. For example:

[22]See for example: GAO-04-394G, GAO-04-39, GAO-04-343SP, GAO-05-325SP, and GAO-06-15.



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- the Bureau is an insular organization and does not always embrace open communications, transparency, innovation, and change;
- there were difficulties in drawing on assets and methods from across the agency;
- the organizational structure makes it difficult to oversee a large program and hampers accountability, succession planning, and personal development, among other factors; and
- staff with core skills and experience were lacking in such areas as management of large programs and projects; cost estimating; and sophisticated technology, systems, and development.

While reforms will be needed along a number of fronts, our recent work on governmentwide strategic human capital management highlights some key steps—some of which the Bureau is already taking—to help ensure it identifies and closes current and emerging skill gaps to ensure the Bureau has the workforce needed to effectively and efficiently design and execute a successful census. These steps include:

- developing workforce plans that fully support the Bureau's need for highly skilled talent, including defining the root causes of skills gaps, identifying effective solutions to any shortages, and taking action to implement those solutions;
- ensuring recruitment, hiring, and development strategies are responsive to changing applicant and workforce needs, and
- evaluating the performance of initiatives to address critical skill gaps and make appropriate adjustments.[22]

## The Bureau Has Launched an Ambitious Planning Program for 2020

The Bureau, recognizing that it cannot afford to continue operating the way it does unless it fundamentally changes its method of doing business, has already taken some important first steps in addressing these questions, as well as other areas. For example, the Bureau is looking to reform certain aspects of its IT systems planning, in part to ensure that the technical infrastructure needed for 2020 will be tested many times before operations begin. The Bureau also is rebuilding its research directorate to

[22]GAO-11-278.



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lead early planning efforts, and has plans to assess and monitor the skills and competencies needed for the 2020 headcount.

Further, the Bureau already has developed a strategic plan for 2020 and other related documents that, among other things, lay out the structure of planning efforts; outline the mission and goals for 2020; and describe the research and testing phase of the next enumeration. For example, to address major cost drivers such as field infrastructure, labor, and IT systems, as well as, the quality of data collected, the Bureau has identified the following four research tracks that focus on a(n):

- *Expanded, Automated, and Tailored Response,* which attempts to reduce paper, make it easier for the population to be counted, and tailor response options, such as the Internet.
- *Reengineered Field Structure,* including a Bureau-wide integrated IT infrastructure that, for example, will allow for a real-time, Web-based system to manage data collection in the field.
- *Continual Address Frame Updating and Targeting,* which, for example, expands the sources of data, to include commercial databases and administrative records, in the Master Address File so that a full address canvassing may not be required at the end of the decade.
- *Using Administrative Records for Nonresponse,* which includes a major study to determine to what extent administrative records can be used for nonrespondents.

The Bureau's early planning efforts are noteworthy given the Bureau's long-standing challenges in this area. For example, in 1988, just prior to the 1990 Census, we noted that the Bureau's past planning efforts generally started late, experienced delays, were incomplete, and failed to fully explore innovative approaches.[24] Planning for the 2000 Census also had its shortcomings, including, as we noted in our 2004 report, a persistent lack of priority-setting, coupled with minimal research, testing, and evaluation documentation to promote informed and timely decision making.[25] And, while the planning process for the 2010 Census was initially

[24]GAO, *Transition Series: Commerce Issues,* OCG-89-11TR (Washington, D.C.: Nov. 1, 1988).

[25]GAO, *2010 Census: Cost and Design Issues Need to Be Addressed Soon,* GAO-04-37 (Washington, D.C.: Jan. 15, 2004).



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more rigorous than for past decennials, in 2004 we reported that the Bureau's efforts lacked a substantial amount of supporting analysis, budgetary transparency, and other information, making it difficult for us, Congress, and other stakeholders to properly assess the feasibility of the Bureau's design and the extent to which it could lead to greater cost-effectiveness compared to alternative approaches. As a result, in 2004, we recommended that the Bureau develop an operational plan for 2010 that consolidated budget, methodological, and other relevant information into a single, comprehensive document.

The Bureau later developed specific performance targets and an integrated project schedule for 2010. However, the other elements we recommended were only issued piecemeal, if available at all, and were never provided in a single, comprehensive document. Because this information was critical for facilitating a thorough, independent review of the Bureau's plans, as well as for demonstrating to Congress and other stakeholders that the Bureau could effectively design and manage operations and control costs, we believe that had it been available, it could have helped stave off, or at least reduce, the IT and other risks that confronted the Bureau as Census Day drew closer.

The Bureau's strategic plan for 2020, first issued in 2009, is a "living" document that will be updated as planning efforts progress. As the approach for 2020 takes shape, it will be important for the Bureau to avoid some of the problems it had in documenting the planning process for the 2010 Census, and pull all the planning elements together into a tactical plan or road map. This will help ensure the Bureau's reform initiatives stay on track, do not lose momentum, and coalesce into a viable path toward a more cost-effective 2020 Census. On the basis of our work on planning for the 2010 Census, a road map for 2020 could include, but not be limited to, the following elements that could be updated on a regular basis:

- specific, measurable performance goals, how the Bureau's efforts, procedures, and projects would contribute to those goals, and what performance measures would be used;
- descriptions of how the Bureau's approaches to human-capital management, organizational structure, IT acquisitions, and other internal functions are aligned with the performance goals;



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- an assessment of the risks associated with each significant decennial operation, including the interrelationships between the operations and a description of relevant mitigation plans;
- detailed milestone estimates for each significant decennial operation, including estimated testing dates, and justification for any changes to milestone estimates;
- detailed life-cycle cost estimates of the decennial census that are credible, comprehensive, accurate, and well-documented as stipulated by Office of Management and Budget and GAO guidance; and
- a detailed description of all significant contracts the Bureau plans to enter into and a risk management plan for those contracts.

A comprehensive road map could generate several important benefits. For example, it could help ensure a measure of transparency and facilitate a more collaborative approach to planning the next census. Specifically, an operational plan could function as a template for 2020 giving stakeholders a common framework to assess and comment on the design of the census and its supporting infrastructure, the resources needed to execute the design, and the extent to which it could lead to greater cost-effectiveness compared to alternative approaches. Further, it could be used to monitor the Bureau's progress in implementing its approach, and hold the agency accountable for results. Importantly, to the extent the plan—or aspects of it—are made available using social media tools, it could prompt greater and perhaps more constructive civic engagement on the census, by fostering an ongoing dialog involving individuals and communities of stakeholders throughout the decade.

## Concluding Observations

The Bureau goes to great lengths each decade to improve specific census-taking activities, but these incremental modifications have not kept pace with societal changes that make the population increasingly difficult to locate and count cost-effectively. The Bureau is fully aware of this problem and has wasted no time in turning the corner on the 2010 Census and launching the planning efforts needed for a more cost-effective enumeration come 2020.

Many components are already in place, and a number of assessment and planning activities are already occurring. At the same time, the Bureau has also been responsive to the recommendations we have made in our past work. As these actions gather momentum in the years ahead, it will be important that they put the Bureau on a trajectory that boosts its capacity



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to conduct an accurate count, control costs, manage risks, and be more nimble in adapting to social, demographic, technological, and other changes that can be expected in the future. It will also be important for Congress to continue its strong oversight of the census to help ensure the progress the Bureau has made thus far continues going forward. We look forward to supporting the Subcommittee in its decision making and oversight of the decennial census.

Chairman Carper, Ranking Member Brown, and Members of the Subcommittee, this concludes my prepared statement. I would be pleased to respond to any questions that you might have at this time.

## GAO Contacts

If you have any questions on matters discussed in this statement, please contact Robert Goldenkoff at (202) 512-2757 or by e-mail at goldenkoffr@gao.gov. Other key contributors to this testimony include Benjamin Crawford, Vijay D'Souza, Dewi Djunaidy, Ronald Fecso, Robert Gebhart, Richard Hung, Signora May, Lisa Pearson, Jonathan Ticehurst, and Timothy Wexler.



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Daniel Castro

Senior Analyst
Information Technology and Innovation Foundation (ITIF)

"Census: Learning Lessons from 2010, Planning for 2020"

Before the

Senate Homeland Security and Government Affairs Committee
Subcommittee on Federal Financial Management, Government Information, Federal Services, and International Security
U.S. Senate

April 6, 2011

Chairman Carper, Ranking Member Brown and members of the Committee, I appreciate the opportunity to appear before you to discuss technology opportunities and trends for the 2020 Census. My name is Daniel Castro. I am a senior analyst at the Information Technology and Innovation Foundation (ITIF). ITIF is a nonpartisan research and educational institute whose mission is to formulate and promote public policies to advance technological innovation and productivity.

The Constitutionally-mandated decennial census produces important demographic data used by government to deliver services and make political, economic and social decisions. Enumerating the entire population of our nation is a considerable undertaking and, as far back as the 1890s with the invention of Herman Hollerith's electro-mechanical tabulator, the government has relied on information technology (IT) to make the process more efficient. In 2000, the U.S. Census Bureau established itself as a digital pioneer by making the United States one of the first countries in the world to use an Internet-based data collection method for its population census.



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Through this project, the United States demonstrated that it was a global leader in using IT for e-government.

Unfortunately, the Census Bureau has failed to keep pace with current advancements in IT. The 2010 Census cost approximately $13 billion, more than any other census before it, and did not use IT efficiently or cost-effectively.[1] For example, the Census Bureau did not provide an online response option and its efforts to use mobile devices for non-response follow-up were unsuccessful. While we cannot roll back the clock, we can learn from the past, as well as the successes of other nations, and better use IT in the next census. With that in mind, to improve the 2020 Census, I recommend the Census Bureau provide an online data collection option and adapt to current technology trends such as cloud computing, low-cost mobile devices, and social networks.

## Provide an Online Data Collection Option for the 2020 Census

The Census Bureau should allow individuals to submit their census forms online in 2020. Internet-based transactions are generally less costly, more accurate and more secure than their paper-based counterparts. The Census Bureau itself experienced generally positive results in its earlier tests of an Internet response option in 2000, yet it failed to fully explore how most effectively to implement a similar approach in the 2010 Census. During this period, home broadband adoption has grown in the United States from 3 percent in June 2000 to 66 percent in May 2010.[2] Moreover, by 2020 the U.S. Federal Communications Commission estimates that more than 90 percent of American home will have broadband access.[3] It is a positive step that the Census Bureau is currently testing an internet response option for the American Community Survey to better plan for the 2020 Census.[4]



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My review of the census data collection methodologies used by government statistics agencies in countries other than the United States shows that other countries, including Canada, Singapore, Norway, and Australia, have far surpassed the United States in the use of the Internet to conduct the census. For example, the Australian Bureau of Statistics expects that at least 30 percent of the population will choose to use the Internet response option in 2011, almost tripling the percentage of households that completed it in 2006.[5] Worldwide more than 30 countries are providing or experimenting with an Internet response option from Japan to Slovakia.[6]

Many countries have achieved notable levels of success with an Internet response option. In 2006, Canada found that if it achieved a 16 percent Internet response rate, the cost savings would exceed the cost of implementing the Internet response option. Given that it exceeded its response rate goal, Canada not only saved money on its 2006 census but now has the infrastructure in place to conduct future censuses online.[7] For example, for the 2011 Census Statistics Canada announced it was spending only $19.7 million (CAD) for an upgrade of the software used in the 2006 Census.[8]

Moreover, developing an online census, or any similar IT application, has high fixed costs and low marginal costs. This means that while the development costs for most countries are similar, large countries can spread the costs over a larger population, resulting in a lower cost per person. Given that the population of the United States is almost 10 times larger than the population of Canada, the United States should expect to be able to develop a cost-neutral Internet response option even with a significantly smaller percentage of its population using the option.

Singapore also generated an impressive Internet response rate of 15 percent in its 2000 census, even though only 32 percent of Singapore's population had Internet access at the time.[9] Last



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year, Singapore conducted its 2010 Census and the online response rate grew to 38 percent.[10] This high response rate has been credited in part to the design of Singapore's census, which encouraged respondents to use the Internet. The Singapore census offered three data response methods—mail, telephone, and Internet—but each response method was offered at a different stage. First, all individuals were invited to respond by Internet. Then for the individuals who had not responded by Internet, phone interviews were offered. Finally, census workers used paper forms to enumerate the remaining individuals.[11]

Providing the U.S. population with an Internet-based census response option would yield many benefits for both the Census Bureau and respondents, including increased convenience, accessibility and usability, improved accuracy, reduced costs, increased security over traditional paper-based methods, and other less tangible benefits.

Web-based forms can provide a more user-friendly experience than paper forms by offering well-designed interfaces that increase legibility and accessibility. For example, people with disabilities may find an online form easier to complete and return than a paper-form because of the accessibility features available on modern computers, including assistive devices, large text, and screen readers. In addition, web-based forms can increase usability by providing additional guidance and contextual help. To illustrate, web surveys can use popup windows, trouble-shooting wizards, and searchable guides to ensure individuals can get help and successfully complete the questionnaire. Furthermore, the web-based form can be customized for each user. Thus, for instance, questions can be personalized on the basis of previously provided information, and irrelevant questions can be suppressed. Users can also select their preferred language. Finally, users can easily print a copy of the census questionnaire for their own records after completing the form.[12]



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Collecting data online has the potential to improve data accuracy over paper-based methods for several reasons. First, online forms can handle atypical data such as unusually long responses. One limitation of the paper-based census, for example, is that some large households cannot report all information on each household member because there is not space on the questionnaire. With a web-based census form, this space problem would not exist. Second, web forms can have automatic error-checking to prevent users from submitting invalid or incomplete data. Thus, for example, client-side scripts—computer code executed in the user's browser—can generate a warning to alert users that they have not completed all fields before they submit their web form. Third, Internet-based census forms can use discrete options, such as selection menus or checkboxes, to reduce the number of possible ambiguous answers and ensure all data is coded correctly.[13] Fourth, online data collection eliminates the possibility for error during the scanning, decoding, and transcribing processes that must occur for paper forms. In addition, because data collected online require less processing than data collected using paper forms, census results can be made available more quickly if the data are collected online.

Using the Internet to collect census data can help reduce the costs of data collection by reducing mail-back costs, processing costs, and follow-up costs.[14] First, the Census Bureau saves the cost of postage that it must pay for every census questionnaire returned by mail. Second, Internet-based web forms eliminate the expensive intermediary steps of paper-based data collection, such as scanning and transcribing. Third, providing an Internet response can help the Census Bureau reduce the number of individuals with whom it must follow up. Some of the savings could come from individuals who respond to the census by Internet who otherwise would not have responded, although previous surveys have found that offering an Internet response option did not increase the overall response rate. Additional savings could come from reduced follow-up



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costs, because forms submitted online are less likely to be inconsistent or incomplete.[15] Further savings could come from reducing nonresponse follow-up costs for replacement questionnaires, which are sent to individuals who have not responded after some predetermined threshold date. The Census Bureau found during tests in 2003 and 2005 that when an Internet census response option is provided, the response rate prior to the threshold date is higher. The Census Bureau has estimated these savings from reduced nonresponse follow-up to be in the range of $300,000 to $500,000 per census.[16]

In terms of data security, it should be noted that all census records are eventually stored electronically, regardless of how they are collected. The security of the census data while in storage is not affected by the manner in which the census data are collected. Internet-based data collection affects the security of the data only while the data are in transit. If strong encryption and authentication methods are used, sending data over the Internet can be more secure than sending a census questionnaire through the mail. This statement is not an indictment of the U.S. Postal Service but rather a recognition of the fact that encrypted digital information is more secure than the same unencrypted information when it is on paper. Encrypted electronic data, for example, can only be accessed by an individual with the appropriate passcode, whereas unencrypted data in an envelope can be accessed by anyone with a letter-opener.

Finally, providing an Internet response option for the census has a number of additional, less quantifiable benefits. Providing respondents with access to the census questions online can help the Census Bureau create a more modern image for itself and might help reduce some of the resistance to the census.[17] Citizens increasingly expect government services to be online, and providing an Internet option would help the Census Bureau meet the demands and expectations of its customers.[18] Large-scale projects such as providing an Internet response option for the



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census could also help to develop the skills and knowledge base of federal employees, which could then subsequently be leveraged in other e-government projects.

## Use Technologies Such As Cloud Computing, Mobile Devices and Social Networks

Since planning for the decennial census begins well in advance of the actual operation, the Census Bureau cannot be expected to predict the technology that will be available many years down the road. However, the Census Bureau can incorporate technology trends into its planning and operations. For example, while we did not know in 2000 how many Americans would be using the Internet a decade later, we had every reason to believe that this upward trajectory in adoption would continue. With this in mind, the Census Bureau should plan to make better use of technology such as cloud computing, mobile devices, and social networks—three trends in IT which promise to deliver flexibility, cost-savings, and user-engagement to organizations that employ them wisely.

The first IT trend that the Census Bureau should incorporate in to its 2020 Census is cloud computing. Cloud computing is a term that refers to the practice of selling IT as a service, including software as a service, platform as a service, and infrastructure as a service.

In the old model of computing, an organization would estimate how much computing power it needed, and then purchase the number of servers required to meet its peak needs. Most of the time, however, these computing resources would be underutilized. In addition, if an organization's needs exceeded it estimates, the organization would have to scramble to purchase and bring online more servers. Cloud computing eliminates many of these challenges.



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For one, cloud computing creates a more flexible environment that allows organizations to "rent" computing power on an as-needed basis—an organization can scale up or down its IT usage according to demand. Organizations also benefit from the agility that cloud computing offers them as they have no long-term commitments and no high-fixed costs. Government agencies, for example, can better align cost with use by only paying for their actual use of IT resources, rather than having to overbuild capacity based on potential demand. This agility also allows organizations to easily upgrade their applications as they can change platforms simply by switching cloud providers.

Cloud computing also allows organizations to focus on their core business and not their IT. Running data centers—buying, installing, operating, maintaining, and upgrading servers—is resource intensive. Organizations benefit from cloud computing because cloud computing service providers can provide greater economies of scale, share resources across multiple customers, and provide higher levels of expertise in operating a secure, reliable, and energy efficient data center. Cloud computing can be more efficient as most organizations, particularly small and mid-sized organizations, are not sufficiently large or sophisticated enough to take advantage of the economies of scale possible with IT.

The concepts behind cloud computing—on-demand, scalable and pay-per-use—make it ideal for applications such as the census which have variable demand for resources. For example, the computing resources needed by the Census Bureau peaks sharply during the rather short period of time when individuals and census workers are submitting responses, but go unused at other times. This means that if the Census Bureau, or its contractor, used cloud computing, it would not need to invest in a large amount of IT infrastructure but could instead only pay for the actual computing resources used. A move to the cloud for the census would also be in line with the



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Office of Management and Budget's (OMBs) efforts to create a "cloud first" policy that is reducing the size of the federal government's data center footprint.[19]

Any technology investment carries risks, but most of these risks can be managed through proper administrative and technical controls. Unfortunately, government IT investments are often judged primarily on their performance rather than both their performance and cost-effectiveness. When performance is the dominant metric, government agencies have a tendency to delay adopting new technology that may introduce some risk. For example, the Census Bureau might be tempted to eschew a public cloud offering (i.e. a cloud service provided in a shared environment over the Internet) in favor of a more expensive private cloud solution (i.e. a cloud service deployed on a private network that shares no resources) because of potential security or privacy concerns or fears that a public cloud may not offer sufficient reliability.[1] To avoid this type of risk-averse decision-making that doomed the use of an Internet response option in 2010, the Census Bureau should be held accountable not only for its performance but the degree to which it applies cost-saving technologies.

The second IT trend that the Census Bureau should take into account is the proliferation of low-cost mobile devices, such as smartphones and tablet PCs, and the mobile Internet. By 2015, fourth-generation (4G) wireless networks such as LTE should be widely deployed and available to provide mobile broadband access to over 90 percent of Americans. Moreover, we should expect this trend of increased mobile connectivity to continue.

[1] In regards to reliability, cloud computing is somewhat analogous to electricity. Just as government could have more reliable operations if it ran its own generators rather than rely on public utilities, the benefits of doing so do not outweigh the costs. Similarly, government agencies should be cautious that they do not avoid public cloud offerings simply because of nebulous concerns about data security.



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The Census Bureau should plan to take advantage of the availability of low-cost, high-performance, off-the-shelf mobile computing devices in 2020. Using a mobile device for data collection and address canvassing can allow census workers to enter data more accurately and efficiently. Over 100 hundred countries have reported using GPS/GIS technology for automating geographic data collection and verification in their census.[20] The Census Bureau planned to use handheld computers in 2010, but ultimately abandoned this effort due to mounting delays and costs. Rather than developing proprietary and expensive handheld devices as the Census Bureau choose to do for 2010, in the future it should use low-cost off-the-shelf equipment. This will allow it to select the most cost-effective technology available, rather than using more expensive technology that is almost a decade old.

Because web applications can be developed to be platform-neutral, the Census Bureau does not need to know the exact technical specifications of the next generation of mobile devices. It does not matter whether these devices are smartphones, PDAs, tablets or some hybrid form-factor as long as they can access the Internet. By using light-weight mobile apps that run from the cloud, the Census Bureau can develop data collection tools for census workers that will run on tomorrow's devices. In addition, if the Census Bureau uses off-the-shelf products, like a consumer-grade tablet PC, in 2020, it could then donate these computers to low-income schools after the census is complete. Donating these PCs would not pose any privacy risks because these computers would have no sensitive data stored on them.

Consider the example set by Brazil, which is the fifth largest country in the world by population and has a population that is roughly two-thirds that of the United States. Brazil equipped its enumerators in the 2010 Census with off-the-shelf equipment—150,000 LG smartphones and 70,000 Mio PDAs—for its data collection and mapping efforts.[21] In part because of the nation's



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strategic use of off-the-shelf technology, Brazil conducted its 2010 Census for approximately $900 million.

Finally, the Census Bureau should more actively engage with users on mobile devices and social networks. The purpose of these activities should be to continue what the Census Bureau has always done which is to bring the census to the people. Achieving high response rates is important for reducing the need for non-response follow-up, one of the most costly aspects of the census. One way to improve response rates is to engage with users online. For example, individuals that complete the census online could be given the chance to share a "digital badge" with their contacts on social networks that says they have been counted which would serve as a reminder to others to complete their forms. Currently, 46 percent of U.S. adults use social networks.[22] Of U.S. adult Internet users, 61 percent use an online social network—including more than 40 percent of U.S. Internet users use Facebook and 8 percent are on Twitter.[23] The use of social networks is expected to continue to continue to grow over time.

Increasingly Americans will also be accessing the Internet through mobile devices. The Census Bureau should be sure to consider the different types of devices someone might use to respond to an online questionnaire and incorporate tools to make it easier for individuals to complete a census form using a mobile device. Using technology like QR codes (i.e. matrix barcodes), for example, could give individuals the ability to point the camera of their smartphone or tablet at a census form and be automatically directed to their census form online without keying in an alphanumeric passcode.



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## Conclusion

With strong program management and proper IT governance, the Census Bureau should be able to better utilize IT in the 2020 Census to not only to improve existing operations, but to find innovative ways to use technology to deliver more value to citizens. For example, the Census Bureau (or Congress) may eventually decide that collecting data every decade no longer makes sense in our fast-paced world and instead turn to population registers for this data. Many countries, including Sweden, Finland, Denmark, and Iceland, for example, no longer conduct a questionnaire-style census but instead gather census data from administrative records. These countries have found that a register-based census—that is, a census using existing data from administrative records—is cheaper and faster and places less of a burden on the county's population than a questionnaire-style census.[24] In addition, some countries have begun substituting or supplementing a traditional population-wide census conducted every five or 10 years with smaller surveys conducted more regularly.

Given the rising costs of conducting the decennial census, the U.S. Census Bureau should welcome the opportunity to use IT to reduce costs and improve quality. Every technology project faces certain obstacles; however, the Census Bureau should respond to these challenges with creativity and thoughtfulness, rather than resign itself to the familiar yet impractical methods of the past. Certainly new technology is not a panacea, but it can help organizations like the Census Bureau achieve their mission more efficiently and effectively.



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***Prepared Statement of Thomas M. Cook,***
***Co-Chair, National Research Council Panel to Review the 2010 Census***

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Subcommittee on Federal Financial Management, Government Information,
Federal Services, and International Security
U.S. Senate Committee on Homeland Security and Governmental Affairs
April 6, 2011

Mr. Chairman, Ranking Member Brown, and members of the subcommittee, thank you for asking me to testify before you today. I am Thomas Cook, co-chair of the National Research Council's* Panel to Review the 2010 Census. As such, I am pleased to be able to summarize the panel's recently released interim report, *Change and the 2020 Census: Not Whether But How*, copies of which have been provided to the subcommittee and which is available on the National Academies Press Web site. But I also speak in the capacity in which I accepted the panel chairmanship in 2009—as an experienced operations researcher and systems engineer viewing the challenges of the decennial census from anew. I trust that you understand that I speak on the panel's and the National Academies' behalf when commenting on the panel's interim report, but that—particularly in answering any questions you may have—my opinions are strictly my own, and should not be construed as formal guidance from either the panel or the Academies.

Sponsored by the U.S. Census Bureau, the Panel to Review the 2010 Census is charged to provide an independent evaluation of the 2010 census with an eye toward suggesting research and development for a more cost-effective 2020 census. In support of that work, the panel held five public meetings during its first year of operation, and subgroups of panel members also participated in brainstorming sessions with Census Bureau staff and other stakeholders. A working group of panel members also visited Statistics Canada headquarters in Ottawa for comprehensive discussions of Canada's use of the internet and field automation and its plans for Canada's 2011 census. However, many of our panel's impressions of directions were formed through the extensive series of 58 site visits we conducted during 2010, to observe 2010 census processes in operation at local census offices, regional census centers, data capture sites, and other census support facilities.

Our panel is not yet in a position to provide a thorough evaluation of the 2010 census; much remains to be learned from the Bureau's Census Coverage Measurement program and its procedural evaluations. But I think it safe to note some broad outlines, as prelude to 2020 planning. Through our site visits, we were uniformly impressed by the dedication of the local and regional census staff—a workforce of exceptionally high quality and diversity, owing to the

* The National Research Council is the operating arm of the National Academy of Sciences, National Academy of Engineering, and the Institute of Medicine of the National Academies, chartered by Congress in 1863 to advise the government on matters of science and technology.



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state of the economy. Yet the great paradox of the 2010 census is that this high-quality workforce was made to execute plans and procedures that largely follow the "scripts" of the 1970 census. Moreover, in several key respects—for example, the failed attempt to fully develop handheld computers, the major difficulties with the Paper-Based Operations Control System, and the 2006 decision not to permit Internet response—the 2010 census was arguably more hindered than enabled by technology.

From our 18 months of work, I think that the panel is convinced that it is possible to make the 2020 census much more efficient and cost-effective than its predecessors. However, the central premise of the report is that these significant efficiencies are possible if and only if there is a major transformation from 40-year-old, paper-driven processes to processes that are facilitated using today's technology. Successfully executing that major transformation will require:

1. A senior management commitment to change that is publicly announced early in the process and continuously communicated throughout the transformation process;
2. Continued and frequent involvement and oversight in the planning process from senior management representing the key departments including the field organization;
3. Adequate early investment in the research and planning phases of the transformation process; and
4. External help for all phases of the transformation process from research and planning through development, testing and implementation.

In the report, the panel's core recommendations are attitudinal in nature. We suggest that the Census Bureau needs to put some stakes in the ground that should not be the subject of debate, once agreed upon—for example, committing to the use of the Internet for initial response to the census, to implementing automation in its field systems, or to minimizing the use of paper. Generally—as our "Not Whether but How" subtitle suggests—we think that the Census Bureau should explore possible changes as real, viable options, and not as purely hypothetical ideas. As has been observed in the past, increased use of administrative records data has been thought of as the "next big thing" for the "next census"—for at least the past three decennials. Until the question changes from simply *whether* a change could be made to precisely *how*, and to what degrees, a change could be made, promising innovations will remain as merely hypothetical.

In our report, we explicitly recommend that the Census Bureau should motivate its planning and reengineering for the 2020 census by setting clear and publicly announced goals; specifically, we argue that the Bureau should commit to reduce significantly (and not just contain) the per housing unit cost of the census, while limiting the extent of gross and net census errors. Our experience with successful reengineering projects in both the public and private sector is that the setting of bold goals is essential to underscore the *need* and *importance* of that reengineering—again, to avoid it being case as a purely hypothetical exercise.

If I may interject a personal observation that is decidedly not a formal statement of the Academies: my private-sector experience with major systems change suggests that successful reengineering will depend critically on early investment and availability of resources; this is a case where some money must be spent early in the decade in order to make it possible to dramatically reduce costs of the entire census. My experience also suggests that the Bureau will need to be able to tap external expertise and needs to have the capacity to do so.

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The panel's report identifies four high-priority topic areas for research and development efforts in 2020 planning:

1. The application of modern operations engineering to census field data collection operations;
2. Emphasizing multiple modes of response to the census, including response via the Internet;
3. Using administrative records-based information to supplement a variety of operations, and;
4. The continuous improvement and updating of the Bureau's geographic resources.

Very briefly, with respect to the first two topic areas, a point to emphasize is that the Census Bureau should not reinvent the wheel, but should build on and work from external experiences. It should learn from other countries about what works and what doesn't—in particular, from Canada's efforts to double the Internet-response take-up to its 2011 census (from about 18 percent Internet response in 2006) and from Brazil's retooled and handheld computer-based field infrastructure in its 2010 census. The Bureau can also learn from private industry, especially regarding the reengineering of the field processes, and may also derive lessons from other government reengineering projects.

The use of administrative records data is an area where "not whether but how" is particularly salient. In the past, the tendency has been to automatically leap from "administrative records use in the census" to the concept of an "administrative records census"—the most extreme of possible options in this area, using records as a near-complete substitution for enumeration. Accordingly, work in the area has mainly focused on building up records sources and seeing how close the counts come to census results, for the nation as a whole as well as specific study areas. As our report states, the idea of records as a wholesale substitution for "the census" is no longer the most interesting question (if it ever was). What *is* interesting to study is the extent to which records might be used throughout the census process—for updating the address list and inventories of group quarters facilities, for targeting outreach resources and early census operations, as a substitute to asking neighbors or landlords in "last resort" or proxy enumeration, and—most critically, for possible cost reduction—as a possible supplement to nonresponse follow-up. To be sure, there are thorny legal and practical issues that must be worked through regarding the use of records, but the existence of those challenges should not stymie active exploration of the cost-quality trade-offs involved in using records match—and the Bureau's planned match of 2010 census returns to its existing administrative records data system for research purposes should be a useful first step.

Finally, with respect to updating the Bureau's Master Address File (MAF) and its TIGER geographic database, the basic point that the report makes is that continuous updating has a lot of appeal over one-shot, once-a-decade efforts like the comprehensive Address Canvassing operation in 2009. But we argue that the key first step is the development of adequate quality metrics for both MAF and TIGER—objective ways to assess the coverage of both and identify possible gaps. Without such metrics, the Bureau would be flying blind and necessitating expensive, late-stage operations just to achieve comfort with the geographic resources—which, as we and earlier National Academies panels have observed, are the bedrock of a quality census.

Thank you again for the opportunity to testify before you, and I look forward to any questions you may have.

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**Testimony**

**by**

**Arturo Vargas, Executive Director**
**National Association of Latino Elected and Appointed Officials (NALEO) Educational Fund**

**before**

**the United States Senate Homeland Security and Government Affairs Committee**
**Subcommittee on Federal Financial Management, Government Information, Federal Services, and International Security**
**on Lessons Learned from Census 2010 and Planning for the 2020 Census**

**Washington, DC**
**April 6, 2011**

Chairman Carper, Ranking Member Brown, and members of the Subcommittee:
I am Arturo Vargas, Executive Director of the National Association of Latino Elected and Appointed Officials (NALEO) Educational Fund. Thank you for the invitation to appear before you today on behalf of the NALEO Educational Fund to discuss lessons learned from the 2010 Census and planning for Census 2020.

The NALEO Educational Fund is a non-profit, non-partisan organization that facilitates full Latino participation in the American political process, from citizenship to public service. Our constituency includes the more than 6,000 Latino elected and appointed officials nationwide. Our Board members and constituency include Republicans, Democrats and Independents. We are one of the nation's leading organizations in the area of Census policy development and public education, and we are deeply committed to ensuring that the Census Bureau provides our nation with the most accurate count of its population.

With respect to our Census policy development work, since 2000, the NALEO Educational Fund has served on the Secretary of Commerce's 2010 Census Advisory Committee, or its predecessor, the Decennial Census Advisory Committee, and we actively participated in the Committee's discussions surrounding the planning for the 2010 enumeration. We also served on the Joint Advisory Advertising Review Panel (JAARP), which the Census Bureau created to review its advertising and communications efforts. In addition, through our strong relationship with our Latino leadership constituency, we have also become very familiar with the types of challenges that public officials face as a result of the undercount of the Latino population. We also serve as a Co-Chair of the Census Task Force established by the Leadership Conference on Civil and Human Rights, which brings together leading civic and civil rights organizations to address pressing Census issues.

In addition, the NALEO Educational Fund was actively involved in outreach to the Latino community for the decennial enumerations in 1990, 2000 and 2010. In 2007, we launched the "*ya es hora*" (It's Time) campaign, a comprehensive, multi-year effort to integrate Latinos into American civic life. When we launched the campaign, our Spanish-language media partners included Univision Communications Inc., Entravision Communications Corporation, and



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ImpreMedia, and our national partners were the National Council of La Raza, the Service Employees International Union on citizenship promotion and Mi Familia Vota Educational Fund on voter engagement. The *ya es hora* network also includes the collaborative efforts of more than 400 local partners, including community and civic organizations, private businesses, and government agencies. The first two phases of this effort involved mobilizing eligible Latino legal permanent residents to apply for U.S. citizenship, and then mobilizing Latino U.S. citizens to vote.

In October 2009, we launched the third phase of the *ya es hora* campaign, *¡HAGASE CONTAR!* (Make Yourself Count!), which focused on promoting the importance of the Census, educating individuals about filling out their Census forms and encouraging households to mail back their responses once they completed their forms. The national organizations and Spanish-language media leaders for this effort were the same as those for the previous two phases of the *ya es hora* campaign. There were also nearly 400 official national and local partners for *¡HAGASE CONTAR!*. The campaign's programs rested on four coordinated strategies – community-based assistance; leadership training and engagement; information dissemination, and mass-media outreach.

At the community level, the campaign and its partners coordinated 33 Census "forums" nationwide in March and April 2010, which saw close to 5,000 attendees. The events – often held in conjunction with other community fairs – provided an opportunity to directly mobilize residents to participate in the Census, in addition to answering questions regarding the Census process and form. More than 300 partner organizations also served as information centers for the campaign, where information regarding the Census was distributed directly to the community. The NALEO Educational Fund distributed 30,000 motivational posters and 90,000 bilingual factsheets to these centers, in addition to thousands of *ya es hora* campaign and Census 2010 promotional materials, such as t-shirts, stickers and informational literature.

To extend the reach of the campaign's message of participation, the campaign trained over 780 local elected, business, labor, and civic leaders in-person through "train-the-trainer" events



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across the country; and an additional 260 participated in 16 national training webinars. The trainings discussed the implications of the Census count in local terms, how the Census process worked, and provided tools and resources to organize local awareness campaigns. In addition, we distributed thousands of CD-ROM based *ya es hora ¡HAGASE CONTAR!* Toolkits across the country, which included information, templates, and organizing tools for national and local leaders.

Ensuring that the Latino community had access to timely and relevant information on the Census was a critical component of the *¡HAGASE CONTAR!* campaign. Following the success of our 888-VE-Y-VOTA (Go and Vote) bilingual voter information hotline, we launched the 877-EL-CENSO (The Census) hotline on January 1, 2010. All operators were fully bilingual, and trained on all aspects of the Census process. From its launch until July 1, 2010, the hotline fielded 13,950 calls, and nearly 2,000 on March 22 alone (the vast majority of households received Census questionnaires in the mail between March 15 and March 22). Operators fielded calls from 48 states, in addition to the District of Columbia and Puerto Rico. To complement the hotline, we also launched the fully bilingual www.yaeshora.info website in October 2010, which included information on all aspects of the Census, including privacy concerns and step-by-step guides on completing the Census form. In addition, the website featured multi-media pages, electronic "post-cards," RSS feeds, custom maps and data, and tools for local leaders and partner organizations. The website also linked visitors to the campaign's Spanish and English Facebook pages and Twitter feed, which have over 500 followers each. Nearly 30,000 people visited the site from its launch until July, 2010.

Driving the *¡HAGASE CONTAR!* campaign was a coordinated mass-media outreach effort by the nation's leading Spanish-language media companies. A series of motivational public service announcements (PSAs) developed specifically for the campaign featured messages on the importance of the 2010 Census, its impact on our day-to-day lives, confidentiality protections, and the simplicity of the Census form. The PSAs also promoted the 877-EL-CENSO hotline, for viewers to call with questions regarding the Census. Over the course of the campaign, the PSAs aired more than 26,000 times nationwide. In addition, Univision Television Group produced a 22-minute program in which Emmy Award-winning news anchor and journalist Maria Elena



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Salinas discussed the implications of the Census, and walked-through the Census form for viewers. The special aired twice on all Univision affiliates nationwide, and additional times on Telefutura, Univision's other television network.

In March 2010, the NALEO Educational Fund also conducted a direct "get-out-the-count" campaign in Los Angeles County, in which more than 119,000 households were called by bilingual canvassers from the NALEO Educational Fund's phone bank in Los Angeles. The program targeted households in Census tracts with large Latino populations, and a high "hard-to-count" (HTC) score, as determined by the Census Bureau.

Mr. Chairman, it is critical that the nation's decennial Census produces the most accurate count of our nation's population as possible. Census data are the fundamental building blocks of our representative democracy; Census data are the basis for reapportionment and redistricting. The results of the 2010 Census revealed the importance of the decennial enumeration for charting the dramatic growth of our nation's Latino community and the implications of that growth for our democracy's future. The Latino population in the United States was 50.5 million in 2010, and Latinos are the nation's second largest and fastest growing population group. Between 2000 and 2010, the Latino share of the population increased from 12.5% (one of eight) to 16.3% (one of six). As shown in Table 1, Latino population growth fueled the growth of most of our nation's states, including those which gained Congressional seats during reapportionment.

*(Table 1 appears on the next page)*



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**Table 1**
**2010 Congressional Apportionment and Latino Growth for Selected States**

| | | Total Population | | | | | |
|---|---|---|---|---|---|---|---|
| State | Congressional Seat Gain/Loss | 2000 | 2010 | % Change | % Change Latino Population 2000-2010 | % Change Non-Latino Population 2000-2010 | Latino Share of Total Population Change 2000-2010 |
| TX | +4 | 20,851,820 | 25,145,561 | 20.6% | 41.8% | 10.6% | 65.0% |
| FL | +2 | 15,982,378 | 18,801,310 | 17.6% | 57.4% | 9.6% | 54.7% |
| AZ | +1 | 5,130,632 | 6,392,017 | 24.6% | 46.3% | 17.3% | 47.5% |
| NV | +1 | 1,998,257 | 2,700,551 | 35.1% | 81.9% | 23.7% | 45.9% |
| GA | +1 | 8,186,453 | 9,687,653 | 18.3% | 96.1% | 14.0% | 27.9% |
| WA | +1 | 5,894,121 | 6,724,540 | 14.1% | 71.2% | 9.5% | 37.8% |
| UT | +1 | 2,233,169 | 2,763,885 | 23.8% | 77.8% | 18.4% | 29.5% |
| SC | +1 | 4,012,012 | 4,625,364 | 15.3% | 147.9% | 12.1% | 22.9% |
| CA | 0 | 33,871,648 | 37,253,956 | 10.0% | 27.8% | 1.5% | 90.1% |
| CO | 0 | 4,301,261 | 5,029,196 | 16.9% | 41.2% | 11.9% | 41.6% |
| NM | 0 | 1,819,046 | 2,059,179 | 13.2% | 24.6% | 4.9% | 78.3% |
| IL | -1 | 12,419,293 | 12,830,632 | 3.3% | 32.5% | -0.8% | 120.9%* |
| NJ | -1 | 8,414,350 | 8,791,894 | 4.5% | 39.2% | -0.8% | 116.0%* |
| NY | -2 | 18,976,457 | 19,378,102 | 2.1% | 19.2% | -0.9% | 136.8%* |

*In these states, the Latino population growth during the decade exceeded the total population growth, and there was net decline in the non-Latino population. Essentially, Latino population growth helped ensure that the total population increased during the decade.

The Census 2010 data revealing the growth and distribution of the Latino population will now serve as the foundation for the important decisions states are making during the redistricting process. The data highlight the critical need for line drawers to ensure that the maps they produce provide Latinos with fair opportunities to choose their elected leadership and obtain full representation during the electoral process.

In addition, policymakers at all levels of government also rely on Census data to make important decisions that affect the lives of all Americans. These data help make such determinations as the number of teachers that are needed in classrooms, the best places to build roads and highways, and the best way to provide health and public safety services to our neighborhoods and communities. Census data are also used to monitor compliance with civil rights laws and to document incidents of illegal discrimination based on race or gender.



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Finally, the accuracy of Census data is critical for the effective allocation of government funding for schools, hospitals and other vital social programs. According to a March 2010 report by Andrew Reamer of the Brookings Institute which analyzed FY 2008 federal government spending, 215 federal domestic assistance programs used census-related data to guide the distribution of $446.7 billion, 31% of all federal assistance. Census-guided grants accounted for $419.8 billion, 75% of all federal grant funding.[1] In addition, the ten largest federal census-guided assistance programs include several which help ensure that Latino families and their children receive quality health care, education and housing, including Medicaid, Section 8 housing programs, school education grants, Head Start and nutrition programs.

Census 2010 data revealed that nearly one-fourth (23%) of the nation's residents under 18 are Latino. Latinos are significantly younger than the nation's non-Latinos with 34% of Hispanics under 18, compared to 22% for non-Hispanics. The progress made by Latino families and their children will determine the future prosperity of the nation. An accurate count of the Latino community is necessary if we are to make sound policies for the economic, social and political well-being of the entire country.

In this testimony, we will provide our perspectives on the overall efficacy of the 2010 Census, and the challenges we face in achieving a full count of the Latino population. We will then discuss what we learned about several key components of Census 2010 implementation, and we will provide policy recommendations for Census 2020 planning.

I. The Efficacy of the 2010 Census

Overall, there are several indicators which point to the efficacy of the 2010 Census. First, in February 2011, the Census Bureau released a comparison of the actual 2010 count for the nation's population with a preliminary estimate the Bureau derived by taking the nation's 2000 Census population, and estimating the impact of native and net migration, and births and deaths. The comparison revealed that the actual 2010 count exceeded the estimate by a mere 0.1%.

[1] Andrew Reamer, "Counting For Dollars: The Role of the Decennial Census in the Distribution of Federal Funds," The Brookings Institution, Washington, DC, March 2010.



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In addition, the total final mail participation rate for Census 2010 reached 74%, thereby exceeding the 72% rate achieved in Census 2000 for the return of the "short form." This occurred despite several challenges such as significantly less investment in outreach by state governments and our nation's unprecedented economic and foreclosure crises. In fact, the mail participation rates were so high, the Census Bureau was able spend considerably less than initially anticipated for labor-intensive follow-up with households that failed to mail back their forms (non-response follow-up or "NRFU" activities). As a result, the Bureau realized $650 million in cost-savings, which contributed to the $1.6 billion in operational savings the Bureau was able to return to the federal treasury.

The results of data from polling within the Latino community also suggest unprecedented Latino participation in the 2010 Census. According to a poll of Latino registered voters commissioned by the NALEO Educational Fund of Latinos in California, Colorado, Florida, and Texas, more than 90% indicated that they returned their Census form. According to an April 2010 report by the Pew Hispanic Center, 85% of the Latinos surveyed indicated that they had or definitely would send in their Census form, with foreign-born Latinos indicating an even higher participation rate (91%).[2]

Despite the early indicators of the efficacy of Census 2010, we believe that our nation did not achieve a full count of the Latino population. We encountered significant barriers to achieving full Latino participation, many of which are relevant to the planning we must now undertake for Census 2020. First, as a result of the country's economic crisis, many Latinos lost homes through foreclosure or were displaced through other housing problems, making it difficult for them to be reached by mailed forms and other enumeration methods. Many felt disengaged from society and participation in its civic life.

In addition from our extensive work in overcoming barriers to full Census participation, we know that fear and distrust of government are among the leading causes of not participating in the Census. As discussed in greater detail below, we believe the hostile environment toward

[2] Mark Hugo Lopez and Paul Taylor, "Latinos and the 2010 Census: Foreign-Born Are More Positive," Pew Hispanic Center, Washington, DC April 2010.



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Latinos and immigrants in some parts of our country during the enumeration may have contributed to a Latino undercount in those areas.

Moreover, a few misguided but vocal Latino community leaders attempted to persuade Latino immigrants not to participate in the 2010 enumeration as a strategy to achieve comprehensive immigration reform. Together with a broad group of stakeholders that included leading Hispanic evangelical leaders, we strenuously condemned the call for a boycott and conducted vigorous education efforts which emphasized the value of Census participation for Latino newcomers and the confidentiality of the information provided to the Bureau.

Finally, we believe that the Census Bureau still experienced significant challenges in reaching certain Latino "hard-to-count" populations – residents who may be missed by the traditional "mail/out – mail/back" dissemination of the Census questionnaire form because of their housing arrangements or social or economic status. Of particular concern are Latinos who live in Texas' *colonia* neighborhoods – communities with unpaved roads, minimal public service and utilities infrastructure, and low-quality housing. As discussed in more detail below, miscommunication between Census Bureau regional officials and the community regarding the method of enumeration which was going to be used in the *colonias* contributed to significant community confusion about how to participate in the enumeration, and eroded community trust in Census enumeration efforts. These operational challenges may have impaired the accuracy of the count of Latinos in the *colonias* area.

The Census Bureau will produce a more definitive evaluation of Census 2010 when it provides the results of the Census Coverage Measurement survey, which will tell us more objectively the extent of any undercounts and overcounts by region and state, by race and Hispanic origin, and by age. The release of these findings is scheduled for 2012, and we look forward to gaining a better understanding of whether the Census 2010 design and methods were equally effective for all segments of the population.



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Based on our evaluation of the "successes" of the 2010 Census and the challenges we encountered which likely prevented a full count of the Latino population, we offer recommendations on policy and procedural improvements which should be implemented during the planning and operations of Census 2020. Our recommendations encompass the full range of decennial enumeration activities, from the appointment of top Census Bureau leadership through the funding of Census 2010 post-survey evaluation activities.

II. Appointment of Top Census Bureau Leadership

One of the greatest challenges facing the 2010 enumeration was the uncertainty surrounding the appointment of the Census Bureau's Director in 2009. With the advent of the Obama Administration transition, Director Steve Murdock resigned effective January 2009. The current Director, Robert Groves, was confirmed by the U.S. Senate in mid-July 2009. Thus, a little over one year away from Census Day 2010, the Bureau underwent a major leadership transition, at a time when it was facing several demanding planning and implementation tasks, including a major reevaluation of its communications and outreach strategies necessitated by the nation's economic challenges.

We believe the challenge presented by untimely transitions in Census leadership would be addressed by the provisions of the *Census Oversight Efficiency and Management Reform Act of 2010* (S. 3167) which provide for fixed five-year terms for the Census Bureau Director, with the first term starting in January 2012. We believe these provisions will help ensure that the appointments of new Census Directors occur well in advance of each decennial enumeration, and occur independently from Presidential administration transitions.

In this connection, we also urge the appointment of individuals to head the Census Bureau who are scientists, exceptionally skilled in a relevant discipline, such as statistics, the social sciences, or demography, and who possess a thorough understanding of enumeration and survey methodology. In addition, it is critical that the Census Director have exceptional management expertise and experience, particularly with respect to the operational components of the decennial Census, the American Community Survey and other Bureau data activities. The



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decennial Census enumeration is the largest peace-time mobilization of federal personnel in the nation, and the Bureau Director must be able to effectively manage the complex tasks involved in the enumeration operations. Finally, the Bureau's Director must have the capacity to work with stakeholders from across the country from diverse population groups to guarantee a successful census.

III. Census Questionnaire Design and Dissemination

We believe that several improvements in Census questionnaire design and dissemination helped contribute to the efficacy of Census 2010. First, the Bureau conducted extensive testing on the format and wording of the question on race and Hispanic origin, and re-designed the questions in a manner which the research suggested would obtain the most accurate responses. For example, in Census 2000, the format of the question on Hispanic origin resulted in a significant "miscount" of Latinos from national origin groups other than Mexican, Puerto Rican or Cuban. Statistical analyses of the responses to this question indicated that many Latinos identified themselves as "other" Hispanic or Latino, rather than identifying their specific national origin group, thereby resulting in a miscount of Salvadorans and Dominicans in certain parts of the nation. We believe the revised format of the Hispanic origin question on the Census 2010 questionnaire, which provided specific examples of Latino national origin groups, is likely to have improved the quality of data obtained from this question. However, confusion or concern regarding the difference of the race and Hispanic origin questions persists – at least 785 people called our 877-EL-CENSO hotline with questions on this issue. We encourage the Bureau to continue its testing of the format and wording of its questions on race and Hispanic origin to achieve even greater accuracy in responses.

In addition, for the first time, the Census distributed bilingual English/Spanish questionnaires directly to certain households, based on an analysis of the type and distribution of households that would be in greatest need of language assistance to complete their Census forms. Based on the Bureau's own analysis of responses rates, this strategy contributed to higher mail participation rates and decreased net costs for the Bureau, because it reduced the need to conduct NRFU activities with residents who are not yet fully proficient in English. We also know that



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interest in Spanish-language forms was relatively high – the second most common reason for calling the 877-EL-CENSO hotline was to obtain a Spanish-language form (3,800 calls, or 27% of all calls), and an additional 317 needed help with their Census form due to lack of English-language proficiency.

The Census Bureau also effectively disseminated regular and updated information on Census questionnaire return rates for various regions of the country. The Bureau essentially provided this information in "real time" by making it available on its website. The timely dissemination of this information was of great value to community groups in their planning and implementation of outreach efforts. In Census 2020, the Bureau should continue to innovate and use its on-line presence to provide information to stakeholders and improve its communication with the public.

Community groups and other Census outreach partners did experience some significant challenges with respect to the Census Bureau's strategies for dissemination of the questionnaires and other enumeration strategies in the Texas *colonias* area. As documented in a February 2011 report released by the Leadership Conference Education Fund,[3] the Census Bureau determined that for Census 2010, it would continue to use an enumeration strategy in the *colonias* that it had used for several decades previously – a strategy developed for areas where irregular housing and addresses would impair the effectiveness of the traditional mail-out/mail-back strategy. This strategy, which designates certain areas as "Update Enumerate" locations ("U/E") involves visits by Census enumerators to every home in a community, where the enumerators confirm each unit's address and exact location on census maps and collect responses from residents to the same questions asked on the printed census form. Households in U/E areas do not receive the printed questionnaire through the mail.

However, the Bureau's plan to continue using the U/E strategy was not adequately conveyed to community partners who were involved in promoting Census participation in the *colonias*.

[3] The Leadership Conference Education Fund, "The Hard Count: A Community Perspective on 2010 Census Operations in the Gulf Coast and Texas *Colonias*," Leadership Conference Education Fund, Washington, DC, February 2010. A copy of this publication is attached to this testimony, and we hereby submit the publication for inclusion in the Congressional record of these hearings.



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A significant lapse in communication between Census regional personnel and stakeholders working on the ground led such stakeholders to believe that forms would be distributed through the more typical dissemination strategy, with forms being mailed or hand-delivered to residents. The community partners included groups with strong relationships with the Latino and immigrant population of the *colonias*, local government officials, and English and Spanish-language media. These partners conducted their outreach and education efforts based on the premise that the Bureau was using the more typical questionnaire dissemination strategy. It was not until residents failed to receive forms, that community partners became aware that the Bureau would be implementing U/E methods. Residents became extremely confused about and mistrustful of Census enumeration operations, and the promotion and assistance efforts of the community partners. Because of this confusion and mistrust, local leaders lack such confidence in the Census 2010 data and believe the undercount was so significant, that they plan to challenge the count as they did after the 2000 Census.

The NALEO Educational Fund played a key role as U/E operations proceeded in the *colonias*, serving as a liaison between the Dallas Regional Census Office and community leaders. We helped bring concerns of the leaders to regional staff, and made recommendations about changes in media and outreach strategies to address the enumeration difficulties. We assigned several staff members to focus almost exclusively on assisting community advocates with their census campaigns, monitoring the progress of the count in the *colonias*, and ensuring that Census officials addressed community concerns in a timely and thorough manner.

Ultimately, the Census Bureau responded to enumeration challenges in the *colonias*, by enhancing its communications and outreach efforts in the area,, including the greater utilization of paid advertising targeting the *colonias;* the hiring of more enumerator staff and cultural facilitators to assist enumerators to regain the trust of residents; and the enhanced dissemination of detailed information about the enumeration schedule to local community leaders. While the Bureau appears to be confident that its operational enhancements addressed problems with obtaining an accurate count of the *colonia* population, we believe that the Bureau should specifically assess the accuracy of the coverage of the Census in *colonia* areas when it conducts



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its post-enumeration Census Coverage Measurement activities, where it evaluates Census 2010 coverage error.

Another significant challenge in the dissemination of Census questionnaires occurred in Maywood, California, a city in the southern area of Los Angeles County. The Bureau disseminated forms to city residents that listed adjacent cities in the address. Residents were very confused and questioned whether they would be accurately counted in their home city. Local Latino elected officials and other civic leaders were extremely concerned, which again eroded confidence in the Census Bureau. We urge the Bureau to implement procedures to prevent the recurrence of this problem in Census 2020.

Additionally, community partners also experienced difficulties in obtaining information about the Bureau's overall plans for the dissemination of bilingual questionnaires to Latino households, which was vital in preparing community outreach and education strategies. Although the Bureau released maps of the Census tracts which would receive bilingual Census forms, the size of the average Census tract relative to the geographic scope of each map– and the lack of geographic identifying features on the maps, such as city boundaries and roads – prevented community partners from determining the precise areas which would receive bilingual forms. The Bureau also released a list of each of these tracts, but in an electronic format that required extensive reformatting, advanced database skills, and access to geographic information systems (GIS) software to use for any practical application. As a result, groups involved in doing outreach did not receive sufficient information to effectively develop and target education efforts about the bilingual form dissemination.

As we look to the future, we also urge the Bureau to carefully examine data on Latino population growth in "emerging communities" – regions of the country which are not the traditional centers of Latino population concentration. Census 2010 data revealed significant growth of the Latino population in the Deep South, the Pacific Northwest, New England and the Midwest. In determining its future strategy for disseminating bilingual questionnaires, the Bureau should examine emerging Latino population areas that did not receive the bilingual form to help assess whether such areas should receive the form in Census 2020.



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In addition, we understand that the Bureau is assessing the feasibility of providing an option for residents to respond to the decennial enumeration through the Internet or other electronic means. We believe that providing an electronic means for responding to the Census could potentially increase participation rates for some residents, and is consistent with the growing use of new technology in a variety of governmental operations. As the Bureau proceeds with its assessment, we recommend that it carefully assess its ability to safeguard the privacy of information submitted electronically, and examine how it would need to educate the public in a manner to sustain public trust in the confidentiality of Census information. Moreover, recent research by the U.S. Department of Commerce's Economics and Statistics Administration and National Telecommunications and Information Administration documents the continuing disparity in home broadband Internet access and adoption between certain population groups. The research revealed that Latino and African American households had significantly lower rates of broadband adoption than non-Hispanic White and Asian households.[4] Although the research attributed some of this variance to factors such as income and education level, the gap between Latino and non-Hispanic White broadband adoption persisted even after controlling for those factors. Thus, as the Bureau proceeds with its planning for Census 2020, it must carefully consider the continued racial and ethnic disparities in Internet and broadband access, and it should evaluate options available to make electronic filing accessible to individuals who currently lack the technological resources or skills to utilize electronic filing.

IV. Census 2010 Communications and Outreach Plan

Through our work on the 2010 Census Advisory Committee and the JAARP, the NALEO Educational Fund gained a thorough understanding of the Census Bureau's 2010 communications and outreach activities, including the development of the messages and themes used to educate the public about the importance of participating in the enumeration, the Bureau's media strategy for reaching Latinos, and the Bureau's enlistment of community partners for its outreach efforts. Generally, we commend the Census Bureau on its efforts to obtain the input of stakeholders who were familiar with the needs of diverse and hard-to-reach communities while it

[4] U.S. Department of Commerce, Economics and Statistics Administration and National Telecomunications and Information Administration, "Exploring the Digital Nation: Home Broadband Internet Adoption in the United States," Washington, DC, November 2010.



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was developing its communications and outreach plan. We also believe there are areas where the Bureau needs to make significant improvements as it proceeds with its planning for its Census 2020 communications and outreach efforts.

A. Message Development for 2010 Advertising

First, we had several initial concerns about the messages and themes developed by the Bureau to reach Latinos and other residents of the nation, because we did not believe they would resonate with members of the public who were experiencing severe economic challenges and dislocation. Moreover, the initial communication campaign failed to adequately emphasize that information provided to the Census is confidential. The Bureau's contractors revised the campaign to address these concerns, but failed to implement one of the most important recommendations of the JAARP members – the development of messages and advertising targeted specifically toward Latinos who are native-English language speakers and listen to radio and watch television and other media in English. The Bureau and its contractors failed to recognize that a communications strategy aimed at Spanish-dominant Latinos would not reach or engage all of the nation's 50.5 million Latino residents. According to 2009 ACS data, 10.2 million Latinos speak only English at home, or 24% of the Latino population age 5 and older. For Census 2020, the Bureau must develop messages and advertising that specifically target English-dominant Latinos, because they have demographic characteristics that are different from those of Spanish-dominant Latinos or non-Latinos.

B. Census 2010 Media Buys

Generally, we believe that the Census Bureau's paid Spanish-language media advertising was an effective investment in Census education and outreach. As discussed in more detail below, for Census 2020, we believe the Bureau should enhance the amount of its investment in Spanish-language media and revise its targeting for local media buys. In addition, we recommend that the Bureau evaluate the extent to which its investment in Spanish-language paid media advertising helped improve the mail-back return rates of Latinos, and contributed to the cost-savings realized by the Bureau for its NRFU expenditures.



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Our recommendations on Spanish-language media buys are based in part upon a February 2010 analysis we conducted of the Census media plan for hard-to-reach areas. We shared our findings in testimony provided to the Subcommittee on Information Policy, Census, and National Archives of the U.S. House of Representatives Oversight and Government Reform Committee. The recommendations we provided based on that analysis are still relevant to the Bureau's future media plans for Census 2020. First, as was the case with its message development, the Bureau also failed to target English-dominant Latinos through its paid advertising. The Bureau made virtually no investment for media buys to reach this segment of the Latino population, and it must ensure it plans for such investment in its 2020 media plan.

We also found that the $25.5 million allocated by the Bureau for Spanish-language advertising did not adequately take into account both inflation and the growth of the Spanish-speaking Latino population since 2000. Moreover, it was not large enough to ensure that there would be sufficient market penetration for the Latino population, particularly for Latinos in emerging communities. The Bureau must take all of the foregoing consideration into account when determining how much funding to allocate for English- and Spanish-language advertising during Census 2020.

In addition, the Census Bureau must provide greater transparency with respect to the criteria it uses for targeting local Spanish-language media buys during Census 2020 and improve its communication with stakeholders regarding the criteria. We believe that the Bureau provided overly-vague information to stakeholders about its strategy for targeting local media buys during the course of its development and implementation of its Census 2010 communications plan, and that such information made it difficult for stakeholders to clearly understand the criteria used by the Bureau. The Bureau's stakeholders include many organizations that are very familiar with the needs of the Latino community, and the Bureau's lack of clarity prevented those stakeholders from providing the Bureau with effective guidance on the targeting of local media buys.

Our analysis also revealed that the Census Bureau failed to make local television buys in several markets where it appeared that such advertising would be integral for a successful Census enumeration campaign. These included markets with emerging Latino populations that have



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seen rapid growth since the previous decennial census, dramatically low Census form return rates, and high "Hard-To-Count" (HTC) scores - scores which help the Census determine which geographic areas have populations which are the hardest to count. These markets require additional attention beyond the standard elements that are being provided by the other components of the Bureau's outreach program. As the Bureau proceeds with its 2020 planning, it should evaluate whether the lack of local "spot" media buys had an impact on the effectiveness of its media plans in those markets. In addition, as described further below, it should examine whether revisions in its targeting methodology for local Spanish-media buys would result in improved allocation of local buys in those markets. Should the Bureau determine that revisions in its methodology would still not result in the allocation of local buys in those markets, it must determine how to implement other effective strategies to ensure that these emerging populations will have as much awareness of Census 2020 as those who reside in markets that are receiving national and local media buys.

Finally, our analysis also identified potential weaknesses in the methodology used by the Bureau to determine its allocation of local Spanish-language media buys, and we were extremely concerned that those combined weaknesses would contribute to faulty targeting which would fail to secure optimal Latino participation in the Census 2010 enumeration. As it proceeds with its Census 2020 planning, we urge the Bureau to examine whether its methodology for targeting local Spanish-language media buys impaired the effectiveness of its communications plan. We also recommend that the Bureau remedy the weaknesses we identified by appropriately adjusting the methodologies used in its criteria for allocating local media buys, particularly with respect to the HTC score and its use of Census Mail Return Rates (MRR) thresholds to determine whether markets are allocated local buys. For example, the Bureau did not allocate any local media buys to Atlanta, notwithstanding the relatively large number of Latino households in the area. This occurred in part because the Bureau's methodology also takes into account whether the share of the Latino population in a market meets a specific threshold, and Atlanta did not meet that threshold. Similarly, the Bureau did not allocate local media buys to Laredo, where a high share of the market is Latino and hard-to-count, in part because its methodology includes a criterion with a high threshold for total Latino population size.



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Given the critical need to count Latinos in emerging communities or areas without relatively high Latino populations, we recommend that the Bureau place a higher priority on the HTC score and MRR, and a lower priority on the criteria relating to Latino share of the population and total Latino population size when determining its local media buys. This prioritization should replace the Bureau's current methodology, which simply requires that a market meet four of six specified criteria. In our earlier testimony, we offered some recommendations on simple alterations that could be used to improve those methodologies – such as calculating MRRs and HTC scores specifically for Latino-majority tracts, or determining the percentage of Latinos living in low MRR or high HTC tracts – and we urge the Bureau to consider them seriously when developing its Census 2020 local Spanish-language media buy strategy.

C. Social Media and New Technology Outreach Platforms

The NALEO Educational Fund commends the Bureau for its efforts to utilize new media platforms and technologies to reach stakeholders and the public at large. The primary Census 2010 website was engaging and accessible for all audiences, and included tools ranging from an easy-to-use question and answer section, to regularly updated maps and data on MRRs at various geographic levels. The site also included dedicated areas for partners, with information simply organized by intended end-user and audience. The Bureau also launched Twitter and Facebook feeds, which are fast becoming two of the most popular vehicles for information dissemination in the United States.

In addition, the Bureau's early release of a Spanish-language website should be highly commended. The site was launched several months before the start of mail-out operations, and included vital information about the Census for the general public. However, the Spanish-language site was not a direct mirror of the English-language version, and as such lacked many of the features and information contained in the English-language site. It also lacked partner resources in Spanish, limiting the accessibility for community leaders conducting Census outreach who are not fully proficient in English. According to the 2009 American Community Survey, 35.5 million Americans over age 5 speak Spanish, of whom almost half (16.2 million) speak English less than very well. To ensure that some of the most difficult to count residents



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have access to the same information on the Census as those proficient in English, we recommend that the Census 2020 website be fully bilingual in both Spanish and English.

D. The Partnership Program

The NALEO Educational Fund also believes that the Bureau's Partnership Program is an integral component of its Census 2010 outreach efforts, and that a robust Partnership Program is critical for reaching hard-to-count populations and ensuring their participation in the enumeration. Through the Partnership Program, the Bureau engages community-based organizations, religious leaders, educators, local businesses, and media outlets who have strong relationships with hard-to-count populations and are familiar with the barriers they face in Census participation. The Bureau utilizes the assistance of Partnership Program stakeholders in educating residents about the importance of returning their Census questionnaires, and helping them surmount the barriers in completing and returning their forms.

The NALEO Educational Fund and its partners saw numerous cases across the country during the Census 2010 campaign where the vitality of local partnerships with Census Bureau staff played a critical role in the success of local outreach efforts. One such example occurred in the City of Los Angeles, where Census Bureau staff engaged local organizations and leaders early in the Census effort, which allowed for better planning and the strengthening of relationships between community organizations and leaders ahead of the actual Census. In addition to some local funding of non-profit efforts, the Partnership Program ensured that timely and locally relevant information from the Bureau reached community leaders, and that local efforts were able to use limited resources efficiently.

We also recommend that Partnership Specialists, the Census staff that work with local community and business organizations to raise Census awareness, continue their efforts throughout the NRFU operations. Many community-based groups and state partner organizations were confused when there were no Partnership Specialists available in their areas after the mail-out/mail-back phase of the enumeration ended. As result, local partners lacked access to information and paths of communication with the Bureau during the critical NRFU phase, particularly in hard-to-count areas with lower mail response rates.



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For Census 2020, the Bureau must enhance its promotion and utilization of the Partnership Program. It should also make the program an on-going component of its outreach efforts on all Census activities, and not just those related to the 2020 enumeration. To achieve this goal, Congress must appropriate sufficient funding for the Bureau so that it has the resources needed to sustain and strengthen the program. We note that the Bureau faced significant challenges in obtaining sufficient funding for the Partnership Program in FY 2009, when resources were needed to start the critical planning stages of the program. Funding and implementing a robust Partnership Program on an on-going basis would prevent the recurrence of this problem.

E. Census in Schools

Based on our discussions with Latino school board members and other Latino educators, we also believe that the Census in School program was generally an effective component of Census 2010 outreach as it was in 2000. The Census Bureau disseminated lesson plans, teaching guides, and other informational materials about the decennial enumeration that reached 56 million students nationwide. We offer several recommendations on how the Bureau can improve the Census in Schools program during Census 2020. First, the timing of the dissemination of Census in Schools materials should be more closely aligned with school schedules. We heard from educators who did receive the materials at a time when they could be effectively incorporated into their instructional curriculum. In addition, we also learned that in some school districts, materials were not effectively disseminated by top administrators to teachers and other "frontline" educators. The Bureau should work with administrative personnel at school districts during Census 2020 to ensure that they develop and implement effective plans to distribute materials to the educators who have the most direct contact with students and parents. This may also involve more direct promotion of the materials on the Bureau's website to "frontline" educators. Finally, we learned that some school districts found the costs for obtaining Census in Schools materials to be prohibitive. The Bureau should explore options available to reduce the costs incurred by school districts in obtaining and utilizing these materials.

In addition, the Bureau targeted K-12 students for the dissemination of Census in Schools materials in the mainland states. In contrast, only K-8 students were targeted in Puerto Rico and other U.S. territories. There is no justification for this discrepancy, and it should be remedied in Census 2020.



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F. Philanthropic Investment in Census Outreach by Non-Profit Organizations

The participation of non-profit organizations familiar with the needs of hard-to-count communities was integral to the Census Bureau's partnership and outreach activities. This participation would not have been possible without a substantial investment of resources by private philanthropic entities. The investment of private funding was particularly critical in light of the fact that state and local governments faced serious budget constraints that prevented them from providing any significant amount of resources for nonprofit outreach efforts.

In order to implement an effective Census outreach program, non-profit organizations must be able to expand their capacity and carry out intensive education and engagement initiatives in a relatively short amount of time. These organizations need resources to plan and prepare for this kind of effort several months before the actual enumeration. For Census 2020, it is important that the Bureau start to engage and educate philanthropic entities well in advance of the enumeration, so that they budget and distribute funding in a timely manner.

V. Building Public Trust in the Confidentiality and Privacy of Census Responses

Because we know that fear of government agencies and how Census data will be used is one of the most significant barriers to full Census participation by the Latino community, we have strongly advocated for policies that build public trust in the confidentiality and privacy of information provided by Census respondents. We believe that there are several important policies that should be implemented or strengthened as part of Census 2020 planning. First, we believe the federal government should establish an inter-agency task force to educate all federal agencies about the importance of promoting participation in the 2020 Census. The task force should also provide guidance to agencies about the types of activities that promote public trust in the confidentiality of Census data and its proper use by the federal government. The task force can assist agencies in developing strategies to ensure that their activities do not undermine public trust or create barriers to full participation in the Census. The task force should also develop "best practices" for state and local governments, so that the public receives a consistent message from all levels of government regarding the confidentiality of its responses to the Census enumeration.

In addition, before the 2010 enumeration, there was significant public confusion about whether provisions of the federal PATRIOT Act superseded other federal law guaranteeing the privacy of



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data collected during the decennial enumeration. Ultimately, the Department of Justice issued a letter stating that the PATRIOT Act did not override Census confidentiality protections. However, the letter was released on March 3, 2010, less than a month before Census Day. If the PATRIOT Act is renewed by Congress, the Department of Justice should re-issue a statement regarding the supremacy of Census confidentiality provisions well in advance of Census 2020. In addition, all publications and informational materials released by the Bureau which discuss the Census confidentiality provisions of Title 13 of the U.S. Code should explicitly state that no other provisions of law supersede them, including the PATRIOT Act.

Finally, in comparing the Census Bureau's preliminary 2010 population estimates for states and counties with the actual Census 2010 count, we learned that there was a significant variance in the population figures for the state of Arizona, and Maricopa County in particular. In Arizona, the actual Census count fell 4.1% below the Bureau's estimate, the greatest variation of its kind for all of the states in the nation. Similarly, in Maricopa County, the most populous in Arizona, the Bureau had estimated there would be 235,704 more residents than what the actual Census count shows.

We are deeply concerned that the hostile environment toward Latinos and immigrants in Arizona and Maricopa County during the 2010 enumeration undermined public trust in government agencies and the confidentiality of Census data. This in turn may have contributed to an undercount of residents suggested by the Bureau's population estimates. We urge the Bureau to thoroughly examine the variance between its estimates and the actual Census count for all states and counties in the United States, to determine whether those variances indicate an actual undercount and to offer recommendations to address this problem in Census 2020.

VI. On-Going Census Operations and the Diversity of the Census Workforce

During the 2010 enumeration, we also found that there was a need for better communication and coordination between the Bureau's national office, and regional and local operations. We found that in some cases, national policies were not communicated effectively to local offices, or that that national headquarters was not aware of problems in the field. We also learned that there was some times inconsistent interpretation and implementation of practices between various local



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offices. One of the most dramatic examples of this occurred when we tried to obtain clarification regarding policies affecting the completion of the "Be Counted" forms, the forms which could be used by residents who did not receive questionnaires in the mail or misplaced them. Despite our relationships with various Census Bureau staff, we encountered considerable challenges confirming whether Be Counted forms could be distributed by non-Bureau staff, and to what degree non-Bureau staff could provide direct assistance with Census forms. To confuse the situation further, we encountered various conflicting interpretations of the regulations on these two topics from permanent and temporary Bureau staff across the country. For the 2020 Census, the Bureau should implement effective policies to enhance coordination and communication about enumeration policies and procedures throughout the agency.

In addition, the NALEO Educational Fund has consistently urged the Census Bureau to employ a workforce that reflects the diversity of the nation's population, in order to accurately reach and count our nation's Latino residents in the decennial Census. The Bureau must strengthen its existing efforts to implement a well-designed and effective recruitment, retention and promotion plan to increase the overall number of Latinos in the Bureau's permanent workforce. As the Bureau opens and staffs its temporary regional offices for Census 2020, it must hire a diverse group of top managers to lead its regional operations. When the Bureau hires enumerators, it must continue to employ staff members who are familiar with their local communities and residents. For some Latino communities, this involves the employment of enumerators who are bilingual in English and Spanish. During its planning for Census 2020, the Bureau must ensure that it has effective strategies in place to hire such staff in regions with rapidly-growing emerging Latino communities.

VII. The Census Bureau's Advisory Committees

We believe the Census Bureau's Advisory Committees, including the 2010 Census Advisory Committee and its predecessors, played an important role in guiding and monitoring critical Census policies and practices for the decennial enumeration and other key Census operations. The Committees brought together stakeholder from diverse population groups, data users, and organizations of elected officials to provide input on a broad range of Census planning and implementation issues.



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We have very much appreciated the opportunity to serve on the 2010 Census Advisory Committee. The charter of the Committee has expired, and we are also grateful that Census Bureau Director Robert Groves worked with the Committee before its demise and provided us with an opportunity to articulate recommendations for the future Advisory Committee structure and responsibilities. We urge the Bureau to implement the recommendations, so that a newly-constituted Advisory Committee can provide input in the earliest stages of Census 2020 planning.

VIII. Funding for Census Operations and Activities

Throughout the last decade, the NALEO Educational Fund, together with other Census stakeholders, engaged in on-going advocacy to ensure that the Census Bureau received the funding it needed to effectively plan and implement the 2010 enumeration. As of this writing, Congress is considering the Continuing Resolution for FY 2011 (CR) which would fund the government operations for the remainder of the fiscal year. The House-passed version of the CR would appropriate $833.7 million for the Census Bureau's Periodic Censuses and Programs account, a reduction of $152.9 million, or 15.5%, from the President's FY11 budget request.

The level of funding in the House-passed version of the CR would have a serious detrimental impact on several important Census activities. It would impair the ability of the Census Bureau to obtain reliable data from the American Community Survey (ACS). The ACS provides updated data on the demographic and social characteristics of the population that are used by local governments to provide local services, such as emergency preparedness, education, and road maintenance, in a cost-effective manner. Businesses and industry rely on ACS data to plan investments, such as the location of plants and stores, capital projects, workforce availability and training needs, and customer needs and preferences. Thus, reliable ACS data are critical for sound business planning and profitability, and economic prosperity.

Furthermore, other federal programs rely on the ACS for implementation of the programs and priorities of the federal government. For example, the Department of Defense uses ACS data for the implementation of the procurement technical assistance it provides to businesses. The Department of Transportation relies on ACS data for highway planning and construction, and the



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Department of Agriculture uses the data for water and waste disposal system planning in rural communities. Under the federal Voting Rights Act, the Department of Justice must use ACS data to determine which jurisdictions must provide language assistance during the electoral process. In addition, the Bureau uses ACS data in several aspects of its decennial enumeration planning activities, and the lack of reliable ACS data could impair the Bureau's ability to carry out its planning in a cost-effective manner.

The reductions included in the House-passed version of the CR would also prevent the Bureau from implementing a cost-savings plan that would enable it to avoid a full and expensive canvass and updating of the nation's addresses in the years before the 2020 Census. Finally, with such a significant reduction coming halfway through the fiscal year, the Bureau would have to eliminate or delay vital evaluation studies of the 2010 Census which are key to reducing costs for the next enumeration. Without timely results from evaluation programs, census planners could make errors in judgment in planning for the 2020 Census that could increase costs substantially. We urge Congress to reject the reductions to the Census appropriations included in the House-passed version of the CR, and to ensure that the Census Bureau has the resources needed to conduct the ACS and Census 2020 planning in a cost effective-manner.

As we look beyond FY 2011, we note that the Government Accountability Office has consistently documented the fact that reasonable investments in census planning in the early part of the decade help save millions, and perhaps billions, of dollars in census costs down the road. Congress has often turned to the Census Bureau's budget as a source of expendable funds after each census, overlooking the important work the agency does year in and year out and starving the critical research and testing phases of the next enumeration. We commend Members of this subcommittee for their support of the Census Bureau and urge your vigilance in protecting the Census Bureau from misguided raids on its budget in the early years of this decade.

In this connection, we also note that policy proposals have emerged that would significantly impair the sound implementation of the ACS. Some policymakers are supporting legislation which would make responding to some or all of the ACS questions voluntary rather than mandatory. Others have supported efforts to completely eliminate funding for the ACS. With



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respect to the former proposal, in 2003, the Census Bureau conducted a test to determine the feasibility of implementing a voluntary ACS. The Bureau found that a dramatic decrease occurred in mail response when the survey was voluntary; the mail cooperation rate fell by over 20 percentage points. The voluntary methods also resulted in diminished ACS interview rates, which in turn adversely affected the reliability of the ACS estimates produced. In order to maintain reliability of the ACS' sample using voluntary methods, the Bureau would need to significantly increase the sample size for the survey, and the Bureau estimated that such an increase would require $59 million more in expenditures than the funding needed for a survey using mandatory methods.

Ultimately, a strong ACS program will result in cost-savings for the federal and local governments, which will have the reliable data needed to effectively target government funding and services. It will ensure that businesses can thrive and the economy will grow. Eliminating or weakening the ACS is short-sighted, and will prove far more expensive in the long run than any immediate savings realized through cuts in ACS funding We urge Congress to protect and strengthen the ACS throughout the legislative process.

The NALEO Educational Fund remains committed to being an active and thoughtful partner to this Subcommittee, Congress, the White House and the Census Bureau, in ensuring the success of the 2020 Census, so that our nation can rely on the most accurate data possible. I thank the Chairman, the Ranking Member, and the Subcommittee once again for providing us with the opportunity to share our views today on lessons learned from the 2010 Census and planning for Census 2020.



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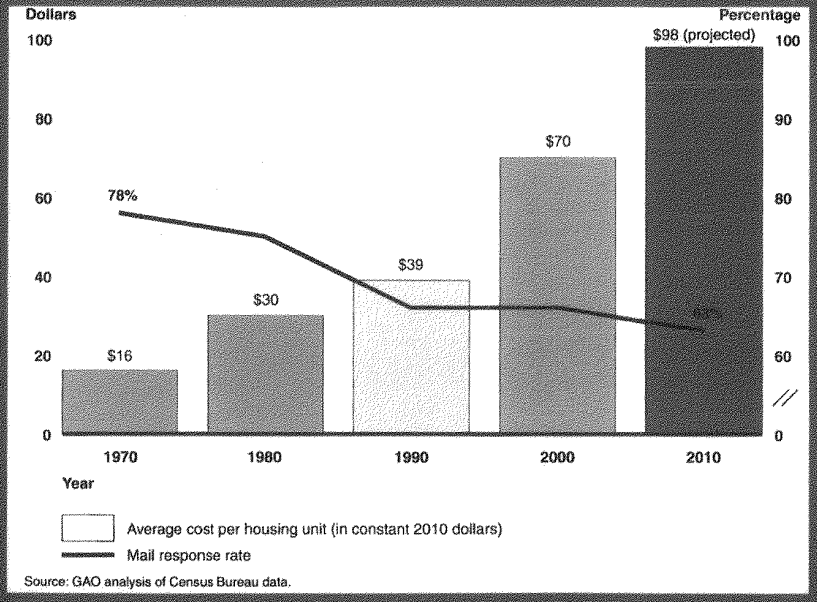
## Rising Cost of U.S. Census

### The Average Cost of Counting Each Housing Unit (In Constant 2010 Dollars) Has Escalated Each Decade, While Mail Response Rates Have Declined




Source: GAO analysis of Census Bureau data.

Note: In the 2010 Census, the Census Bureau used only a short-form questionnaire, prior censuses used both long- and short-form questionnaires. The 1990 and 2000 Census short-form mail response rates are used when comparing 1990, 2000, and 2010 mail-back response rates. Census short-form mail response rates are unavailable for 1970 and 1980, so the overall response rates are shown.

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**HEARING ON**
**"CENSUS: LEARNING LESSONS FROM 2010, PLANNING FOR 2020"**

**SUBCOMMITTEE ON FEDERAL FINANCIAL MANAGEMENT, GOVERNMENT INFORMATION, FEDERAL SERVICES, AND INTERNATIONAL SECURITY**

**UNITED STATES SENATE**

**APRIL 6, 2011**
**Washington, DC**

The Leadership Conference on Civil and Human Rights (The Leadership Conference) appreciates the opportunity to submit a statement for the record on this important topic.

The Leadership Conference is a coalition charged by its diverse membership of more than 200 national organizations to promote and protect the civil and human rights of all persons in the United States. Founded in 1950 by A. Philip Randolph, Arnold Aronson, and Roy Wilkins, The Leadership Conference works in support of policies that further the goal of equality under law through legislative advocacy and public education.

Because the accuracy of the census directly impacts our nation's ability to ensure equal representation and equal access to important governmental resources for *all* people in the United States, The Leadership Conference considers ensuring a fair and accurate census to be one of the major civil rights issues of the decade. But as the 2010 census approached, a number of key policy issues emerged that threatened the Census Bureau's ability to win public confidence for its monumental task of conducting an accurate and timely count:

- In 2009, President Obama's nominations of a Commerce Secretary and Census Director became mired in partisan politics, leaving the Census Bureau without strong leadership just as preliminary field operations for the 2010 census were beginning.
- Subsequent legislative debates over funding and the census questionnaire heightened the risk of delay, confusion, and mistrust among the hardest-to-count populations.
- As field operations commenced in the winter of 2010, heightened fear of government authority made it increasingly difficult for advocates to convince immigrants that it was safe to participate in the census, absent stronger assurances from relevant federal

agencies that census responses were completely confidential and could not be used for enforcement of any other laws.

The likelihood that the census would undercount racial and ethnic minorities, people with low income, people with limited English proficiency, and others—and the financial and political consequences of that undercount—raised serious civil rights concerns about equality of political representation and economic opportunity. Accordingly, The Leadership Conference, together with our sister organization, The Leadership Conference Education Fund (The Education Fund), committed significant resources to a collaborative education and outreach campaign, involving both national and local partners, to improve census accuracy in historically hard-to-count communities.

The campaign, with the tag-line *"It's time. Make yourself count,"* had two overarching goals:

- To educate stakeholders, including the civil rights community, policymakers, community leaders, and the media, about the importance of the 2010 census and the civil rights implications of this constitutionally mandated civic activity; and
- To reduce the historic, disproportionate undercount of people of color, low-income households, and children, as well as other population groups—including immigrants and people with disabilities—who were at risk of being missed in the 2010 census. To achieve this goal, the campaign focused on boosting mail-back rates and fostering cooperation with census enumerators through a combination of grassroots outreach, educational activities and information, and promotional materials and events.

While it is too early to draw sound conclusions about the relative coverage of hard-to-count populations, either nationally or in cities where The Education Fund coordinated grassroots outreach, initial process and demographic indicators strongly suggest that the collaborative campaign played a vital role in the 2010 census in ways that were likely to marshal participation and help improve census accuracy. The most significant accomplishments of the campaign include:

- boosting awareness of the census among hard-to-count populations;
- arming community-based organizations with the information necessary to facilitate response among their constituents; and
- ensuring effective communication between the Census Bureau and local stakeholders.

In eight of the campaign's twelve target cities (Atlanta, Chicago, Houston, Los Angeles, Miami, New York, San Francisco, and Seattle), the 2010 participation rate equaled or exceeded the 2000 participation; in two of the other target cities (Fargo, ND/Moorhead, MN metropolitan area, and

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Phoenix), the rate dropped by only one percentage point. Only Detroit and Milwaukee saw more significant declines in their mail-back rates. These outcomes are notable in light of socio-economic conditions—including greater racial, ethnic, and language diversity; contentious national and local debates over immigration policy; heightened concerns about personal privacy; high unemployment and foreclosure rates as a result of the stubborn recession; and declining survey response rates generally—that led many experts (including Census Bureau staff) to conclude that it would be difficult to match 2000 census participation rates.

Our national census campaign partners were the Asian American Justice Center, the NAACP, the National Congress of American Indians, and the National Association of Latino Elected and Appointed Officials Educational Fund. In collaboration with these partners and community-based organizations across the country, The Education Fund carried out training, promotional activities, and public education efforts in the campaign's target areas where historical and demographic indicators suggested the potential for disproportionately high undercounts. Representatives of national and local partner organizations canvassed low-income neighborhoods and apartment buildings, distributed in-language fliers to ethnic grocery stores, incorporated census themes at local festivals, and identified and filled language gaps in immigrant communities through bus advertisements, radio PSAs, and ethnic media ad buys.

The Education Fund's 2010 census campaign represented the most comprehensive and extensive effort by a census stakeholder organization to promote participation in historically hard-to-count communities and to mobilize local advocates in support of a fair and accurate census by highlighting the civil rights implications. The comprehensive nature of the campaign allowed The Education Fund, working with national and regional census officials and community advocates, to help identify operational problems as the census unfolded, propose solutions, and overcome communication and logistical challenges.

While national in scope, our 2010 census campaign was also structured to meet people where they live, building on the trust of both national and local messengers to more deeply reach affected constituencies, including hard-to-count communities, and move people to action. Our campaign also included a special focus on the Gulf Coast region, whose residents were likely to be especially difficult to reach in the aftermath of hurricanes Katrina and Rita. In 2009, The Education Fund published a report, Counting in the Wake of a Catastrophe: Challenges and Recommendations for the 2010 Census in the Gulf Coast Region, warning of the unique challenges to an accurate census count for the Gulf Coast and recommending a set of policy and operational changes to increase the likelihood of a successful enumeration.

Beyond this, throughout 2010, The Education Fund and its partners worked to keep Census Bureau officials, lawmakers, and local advocates focused on resolving problems as they emerged. This resulted in the expansion of the scope of our campaign to include the colonias of South Texas and hard-to-count areas in the Mississippi Delta, in response to strained and failed

communications between the Dallas Regional Census Office and local leaders along the Texas-Mexico border and in Mississippi.

Our experiences in these distinctly challenging areas were documented in a post-census report released in February 2011 entitled, The Hard Count: A Community Perspective on 2010 Census Operations in the Gulf Coast and Texas Colonias. This report reviews operational challenges in the New Orleans area, hard-to-count areas in Mississippi, and the colonias in the Texas Rio Grande Valley and makes a set of recommendations to inform planning and preparations for the 2020 census.

The combined efforts of the Census Bureau and its partners were not enough to overcome all the obstacles in the Gulf Coast region during the first mail phase of the 2010 census; initial participation rates in the areas we address in our report were all below the national average. During the field follow-up phase of the count, The Education Fund intensified its efforts to help community organizations work effectively with local and regional Census Bureau offices and achieve their goal of a complete enumeration in underserved communities.

There is ample evidence, as documented in our reports, to suggest that both the mail phase and the door-to-door follow up phase in greater New Orleans and in Mississippi's hard-to-count Delta, coastal, and rural areas would have been far less successful without significant involvement and assistance from The Education Fund and its regional and community partners. In the end, nationally, participation rates in the 2010 census equaled those of the 2000 census, when the Census Bureau stemmed a three-decade decline in response rates.

Based on our analysis of operations in these areas, we offer the following policy recommendations for Congress and the Census Bureau, described in fuller detail in the recommendations section of the post-census report:

- Congressional oversight committees should examine the conduct of the 2010 census in the Gulf Coast region, as well as in hard-to-count areas in Mississippi and the colonias—we believe a field hearing would be a useful venue—while advocates' memories are still relatively fresh, to better understand the experiences of community organizations and to catalogue obstacles and proposed solutions early in the planning process for the 2020 census.
- Congress should carefully evaluate the final results of the 2010 census in the Gulf Coast region, in light of continued population growth and other indicators of ongoing economic recovery, as well as the consequences of new and persistent barriers to recovery, in considering whether to fund a special Gulf Coast census in 2012 or 2013 as we recommended in our 2009 report..
- Congress and the Census Bureau should consider revisions to the Local Update of Census Addresses (LUCA) program that would give designated community-based

organizations an opportunity to assist state and local LUCA officials in their reviews of preliminary address lists.

- The Education Fund strongly supports the Census Bureau's proposed initiative—reflected in the Administration's Fiscal Year 2011 and FY2012 budget requests—to update the Master Address File continuously throughout the decade, allowing the Bureau to capture change in the nation's housing stock more effectively; to work closely with the U.S. Postal Service and leverage other administrative sources to document housing changes in real time; and to contain the cost of future censuses by mitigating the need for a massive canvassing operation a year before each enumeration.
- The Education Fund would not support removing the Master Address File from the protection of 13 U.S.C., §9 (which assures the confidentiality of all individually identifiable information the Census Bureau obtains in the course of taking a census), an idea that has surfaced in some advisory committee meetings. Without the strict protection Title 13 offers against using personal and address information against any individual for any purpose, community advocates and local census coordinators might be reluctant to ensure that unauthorized or illegal living quarters are included in the census universe, and residents or owners of those housing units might be more reluctant to participate in the census for fear of detection.

In addition, we offer the following operational recommendations for the Census Bureau (for more details, see the recommendations section of the report):

- Examine the effectiveness of the cultural facilitator program in consultation with other stakeholders and determine how to engage partner organizations more effectively in this program in 2020.
- Examine procedures for hiring bilingual field staff to ensure that employees assigned to work with or collect data from people whose primary language is not English are truly conversant in that language and fully understand the culture of the immigrant communities and families with whom they must communicate.
- Establish a task force or working group to document issues that arose in the 2010 census in the Texas colonias and to make recommendations about the process for determining the most effective enumeration method and outreach strategies for these and similar types of communities in 2020. Such a task force should include representatives of local organizations that serve the residents of colonias and other migrant worker communities on a regular basis.
- In the future, Partnership Specialists should begin outreach to state and local organizations earlier, and more Partnership Specialists should remain in their positions during the Nonresponse Follow-up operation.

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The Leadership Conference will continue to monitor the release of data and measurements of coverage from the 2010 census, with an eye toward the 2020 census and offering recommendations based on our experiences over the past year.

Given the enormous stakes—including the allocation of federal funding and representation in Congress for the next ten years—we applaud the Committee for holding this hearing, and hope that this information is helpful to you. Thank you for your leadership on this important topic.

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For more information:

"The Hard Count: A Community Perspective on 2010 Census Operations in the Gulf Coast and Texas Colonias" – February 2011
http://www.civilrights.org/publications/reports/census-gulf-coast-2011/

"Counting in the Wake of a Catastrophe: Challenges and Recommendations for the 2010 Census in the Gulf Coast Region" – August 2009
http://www.civilrights.org/publications/gulf-coast-census/

The Leadership Conference Education Fund Census 2010 website:
http://www.civilrights.org/census/