

Agility in Action: A Snapshot of Enhancements to the American Community Survey

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1. Introduction

ACS data provide vital information about the demographic, social, economic and housing realities of the United States, down to the community level. The ACS is the only reliable source of information about the people in our communities and how our communities are changing. People in state and local regions use the wealth of information provided by the ACS for a wide variety of purposes, including comprehensive planning, economic development, emergency management, and broadening understanding about local issues and conditions. Businesses rely on ACS data to make key marketing, location, and financial decisions to serve customers and create jobs; when combining these expenditures with the more than \$400 billion distributed annually by the Federal government, ACS data impacts over \$1 trillion worth of investments into our nation's communities each year.

Knowing how critical the ACS is to the strength of our nation, the Census Bureau is constantly looking for ways to ensure that our customers trust and value the survey. Our ability to make the ACS agile in the face of constantly changing times that spawn new data needs ensures that we are continuing to deliver deep public value to our nation's communities. Over the course of the next year, we're engaging in numerous activities to build and maintain customer support and awareness of the ACS. Largely focused on providing a positive experience for our customers, the Census Bureau is working to minimize burden for survey respondents while still allowing the survey to be responsive to emergent issues, keeping content current, and maintaining the high quality of data that our country demands and deserves. The Census Bureau will research changes to ACS protocols by:

Identifying and Using Data Collected by Other Federal Agencies – We only want to ask households once for information already reported to the government, potentially allowing us to remove some questions from the ACS.

Reducing In-Person Follow-Up Contact Attempts – Building on our successes with reducing follow-up telephone contacts while preserving response rates, we're testing new procedures to reduce in-person contacts with survey respondents.

Crafting New Survey Mail Package Messages – While the survey is mandatory, we will test how softening the tone of survey packaging impacts response rates in hopes of finding a permanent solution that is "less stick and more carrot".

Evaluating Changes to Survey Questions – We are researching the possibility of satisfying underlying legal and programmatic needs for data while asking certain questions less frequently, wording questions differently, and eliminating some subparts of questions.

Communicating with Customers on Why We Ask Questions – We have developed communications products to disseminate in the field to help customers understand why we need the information we request from households.

Increasing Our Awareness on How Customers Use ACS Data – We will catalogue and verify data uses to share with multiple stakeholders (government, business, media, non-profits, researchers).

Obtaining Expert Guidance – We are looking outside the Census Bureau for expert guidance on survey and procedural changes to ensure we conduct the ACS using advanced techniques while maintaining survey quality.

Leveraging the Respondent Advocate to Resolve Respondent Concerns – We are ensuring that the Respondent Advocate is fully integrated into ACS operations and has a stronger presence through enhancements to our web page. The Respondent Advocate will also assist in the ACS Messaging Research efforts.

Communicating Strategically – We will develop a communications plan to provide a strategic foundation for engaging our customers and providing them with the best quality experience with the survey as possible.

2. Evaluating the Availability and Suitability of Other Data Sources

a. Identification of Administrative and Commercial Data Sources

In late 2014, the Census Bureau contracted with NORC¹ to review sources of data that could potentially replace or improve specific questions in the ACS, with the goal of reducing burden on ACS respondents. This work pointed to the existence, availability and suitability of various data sources, including data from other Federal, state, and local government sources as well as commercial data, with the acknowledgement that more work would be needed to assess the appropriateness of replacement and quality implications for each question.

b. Evaluating the Coverage and Quality of Other Data Sources

The next step in exploring the use of data sources to replace ACS questions involves identifying and acquiring external data sources, matching them to ACS data, and evaluating the coverage and quality of each data source and the resulting matching. Using an agile approach and coordinating adaptation across program areas, including the 2020 Census Program, the Census Bureau will work to develop strategies for obtaining the desired records, and resolving any policy issues associated with their use. The research will identify matching issues, and the challenges associated with securing external data for all cases. It will integrate external data into ACS, and compare distributions between ACS data and external data sources for each topic. Researchers will also document measurement issues, such as definitional differences and reference period alignment, as well as the expected stability of data elements (i.e., whether we should expect changes to external data sources over time).

¹ Ruggles, P. (2015) "Review of Administrative Data Sources Relevant to the American Community Survey", Prepared for the U.S. Census Bureau, January 31. See http://www.census.gov/library/working-papers/2015/acs/2015_Ruggles_01.html

This research is intended to be a first look at the various topics to document the coverage, quality, and availability of external data sources for potential ACS integration. This research will enable ACS to evaluate the potential of the replacement data sources, identify challenges, and provide direction for further research.

A prioritized list of ACS question topics to be studied has been developed, based on the availability of data sources and likelihood of successful matching. The table below contains the priority 1 and 2 topics that will be the focus for the research occurring in FY15 and FY16. Other items may be studied after these topics are examined. Priority 1 topics are those we believe we have the highest likelihood of finding a suitable replacement using another records source, while Priority 2 topics are the next most likely group of topics.

Table 1. Priority 1 and 2 Topics to be Studied for Replacement by Data Sources

| Topic | Question Number | Estimated Seconds to Complete | Sensitive or cognitively difficult? |
|------------------------------------|------------------------|--------------------------------------|--|
| <i>Priority 1:</i> | | | |
| Phone Service | H8g | 1 | |
| Year Built | H2 | 11 | Difficult |
| Part of Condominium | H16 | 4 | |
| Tenure | H17 | 11 | |
| Property Value | H19 | 11 | Difficult |
| Real Estate Taxes | H20 | 9 | Difficult |
| Have mortgaged/mortgage amount | H22a and H22b | 11 | |
| Second mortgage/HELOC and payment | H23a and H23b | 5 | |
| Sale of Agricultural Products | H5 | 1 | |
| Social Security | P47d | 10 | Sensitive |
| Supplemental Security Income (SSI) | P47e | 8 | Sensitive |
| Wages | P47a | 41 | Sensitive |
| Self Employment Income | P47b | 8 | |
| Interest/dividends | P47c | 20 | Sensitive |
| Pensions | P47g | 8 | Sensitive |
| Residence 1 year ago and Address | P15a | 18 | |
| <i>Priority 2:</i> | | | |
| Number of Rooms and Bedrooms | H7a and H7b | 13 | Difficult |
| Facilities | H8a, H8b, H8c, H8d, | 6 | Sensitive |

| Topic | Question Number | Estimated Seconds to Complete | Sensitive or cognitively difficult? |
|-----------|-----------------|-------------------------------|-------------------------------------|
| | H8e, H8f | | |
| Fuel type | H13 | 14 | |
| Acreage | H4 | 5 | |
| TOTAL | | 214 Seconds (~3.5 mins) | |

A Research Evaluation and Analysis Plan (REAP) is in development that will describe in detail the sources proposed for each topic, as well as the methods and metrics we will use to evaluate the matching and coverage of the those sources to ACS data. This research is an exploratory investigation of the feasibility of replacing ACS data with administrative records.

c. Implications to Topic-Specific Estimates

Next, we will create teams for each ACS topic identified as a potential candidate for records usage based on the results from the first phase of research. Each team will include statistical researchers, subject matter experts and data processors who together can identify and research issues related to records usage.

The teams will make recommendations on whether each question is a good candidate for removal with the use of external data sources in its place. This recommendation will be based on an assessment of the implications of implementing such a change, considering data quality, reliability, alignment of reference periods, break in series, and the limitations of the data source affecting the suitability for use. The team will document and evaluate various options for integrating the records. For instance, for some topics, records may be better suited in assisting with imputation whereas for other topics the records may be used for direct substitution of a survey question (for all or a subset of the ACS respondent pool).

The teams will consider the following types of issues and potential research questions:

Quality of the Source – In some cases, the quality of the records may be more accurate than the respondent’s recollection (e.g., W2 information for wages). In some cases, we may not be able to decipher whether data from records are superior or inferior to response data. What research is needed to study quality in those cases? Does the source capture all aspects of a survey question?

Implications to estimates – Will the move to records cause a break in series? Do the reference periods between the survey item and records align?

Timing – Is the data available for the specific data collection period? How quickly can we access data for the survey period?

Data products – what impact does the use of external sources have on the data products, particularly Public Use Microdata Sample (PUMS) files?

The team will need to perform an assiduous review for each topic of the comparability between what is reported on the data source and what is collected in the ACS. The team will document the alternatives and issues, and run simulations to study the impact on estimates and standard errors using external data in different capacities for each topic. The teams will also document a general timeline for instituting the various options.

d. Milestone Schedule

| Milestone | Date |
|---|-------------------------------|
| Census Bureau delivers an action plan outlining the next steps in pursuing administrative and commercial data sources | July 2015 |
| Preliminary findings on availability, coverage and quality (flow by topic) | September 2015 – October 2016 |
| Launch Topic Teams | July 2015 |
| Recommendations from topic-specific research (flow by topic) | March 2016 to March 2017 |

3. Reducing Follow-Up Contact Attempts to ACS Respondents

a. Background

The most cost effective way for respondents to complete the ACS survey is through self-response when they first receive the survey. If they do not respond to our initial outreach, ACS interviewers must then contact them directly, which often results in repeated phone calls and home visits. These additional follow-up contacts increase cost, whereas a high self-response rate lowers cost. Based on research conducted in 2012 and 2013, the Census Bureau was able to adapt its procedures to reduce the number of attempts made from call centers to ACS respondents, reducing intrusiveness and cost without affecting quality of data. These changes led to an estimated reduction of approximately 1.2 million call attempts per year². We are now researching options to further reduce contact attempts, this time for the in-person visits.

b. Plans for a Pilot with Personal Visit Operations

We are practicing agility in action in the launching of a pilot project in August 2015 which involves approximately one-quarter of the nationwide personal visit workload. The methods planned for this pilot rely upon the creation of a score that reflects the total number of contact attempts made by mail,

² Griffin, Deborah (2013), “Effect of Changing Call Parameters in the American Community Survey’s Computer Assisted Telephone Interviewing Operation” (See http://www.census.gov/acs/www/Downloads/library/2013/2013_Griffin_03.pdf)

telephone and personal visits, taking into account the different levels of burden associated with each type of attempt. Further contact attempts would be stopped for households that have reached a certain threshold score. If the August 2015 pilot is successful, nationwide implementation could occur in 2016, reducing the number of non-response follow-up visits made going forward.

A pilot test is necessary to validate the estimated impacts of the proposed strategy for reducing computer assisted personal interviewing (CAPI) contacts on respondent burden and data quality.³ Additionally, it is expected that field management practices and Field Representative behaviors will differ under the proposed stopping rules from what we see currently. Therefore, a pilot test will allow us to understand these behavior changes and develop appropriate management practices to maximize the effectiveness of these stopping rules. The pilot will be conducted in one-quarter of field management areas across the country, and first-level supervisors in these pilot areas will be assigned with their staff to one of three treatment groups: 1) staff who will see the current “cumulative burden score” for each case and will have cases removed from their assignments once the threshold is reached, 2) staff who will not see the current “cumulative burden score” for each case but will have cases removed from their assignments once the threshold is reached, and 3.) a control group that will not have cases removed from their assignments once the threshold is reached.

c. Milestones

| Milestone | Date |
|---|---------------|
| Complete systems test of software changes needed for the pilot | July 2015 |
| Conduct CAPI burden reduction pilot during field operations | August 2015 |
| Complete analysis of data from the pilot | November 2015 |
| Implement burden reduction procedures into CAPI production nationwide | Spring 2016 |

³ The estimated impacts of various options for reducing CAPI contacts can be found in Griffin, Slud and Erdman (2015) “Reducing Respondent Burden in the American Community Survey’s Computer Assisted Personal Visit Interviewing Operation – Phase 3 Results” (see http://www.census.gov/acs/www/Downloads/library/2015/2015_Griffin_01.pdf)

4. Testing of ACS Mail Materials Messaging

a. Background

The mandatory language on the survey is a cause of concern to some ACS respondents. This is especially true of the message “YOUR RESPONSE IS REQUIRED BY LAW” that appears on the outside of the envelopes that contain the paper ACS questionnaire, and the instructions to respond online. Past research has shown this message is effective in boosting response rates, and many respondents preferred the clarity of the “required by law” message. By increasing self-response rates, we are also reducing burden for respondents, because they will receive less calls or visits from Census Bureau interviewers asking them to fill out the survey. This research seeks to answer whether we maintain high response rates while making the mandatory language more user friendly, employing a “more carrot than stick” approach to this important wording. We are working with external methodological experts to identify ways to potentially change the mail materials messaging and we have begun conducting two field tests with a subset of ACS respondents, starting with the May 2015 sample and continuing with the September 2015 sample. The preliminary results of those tests will be available in the fall. Based on the results of the testing, the Census Bureau would propose changes to the ACS mail materials based on those results for implementation at some point in 2016.

b. Testing Changes to the ACS Envelopes

The Census Bureau sends out the ACS each month, and built the “Envelope Mandatory Messaging Test” into the process beginning in May 2015. This test will measure the impact of removing the phrase “YOUR RESPONSE IS REQUIRED BY LAW” from the envelopes used to mail the initial package (second mailing) as well as the replacement package (fourth mailing). This phrase does not appear on other envelopes. We will continue to examine other possible revisions to the presentation of the mandatory nature of participation in the ACS, and will make future recommendations for additional testing.

We have divided the monthly production sample of 295,000 addresses in 24 nationally representative groups of approximately 12,000 addresses each. For this test, implemented in the May 2015 ACS panel, we used two randomly assigned groups for the experimental treatment group. The total sample size for the experimental treatment group is approximately 24,000 addresses. The remaining cases in the May 2015 panel comprise the control, receiving all standard ACS mailings (envelopes with the mandatory language still included). As we are using production cases for the test, the test will run through the complete three-month data collection period.

Our primary evaluation measure for this test is the self-response rate. Additional metrics of interest include total response rate, the impact on hard-to-count groups, and the impact on ACS estimates. We will also conduct a cost analysis and examine computer assisted telephone interviewing (CATI) and CAPI workloads, including the number of visits needed to gain cooperation.

c. Testing Revised Messages throughout the Mail Materials

In September 2015, the Census Bureau will build an additional field test into its field activities to assess a broader set of revisions to the messages contained in the ACS mail materials sent to respondents. In preparation for this mail messaging test, the Census Bureau solicited feedback about the mandatory messages on the current ACS mail materials from experts in the field of survey methodology.

Additionally, in 2014, the Census Bureau conducted messaging and mail package assessment research that helps us address frequent questions and concerns we hear about the ACS surrounding privacy, intrusiveness, value of the data, and burden of completion. This research included several iterative rounds of qualitative and quantitative testing to improve the way we communicate about the importance of the ACS and the benefits to communities that result from the data. The purpose of this research was to develop messages to increase ACS self-response rates as well as to obtain insights to support general outreach, data dissemination, materials development, and call center and field operations. The design of the mail materials proposed for these tests is based on the key findings from this study⁴.

Taking this research and feedback from survey methodology experts into account, the Census Bureau is proposing to test five sets of mail materials aimed at improving the way we communicate the importance and benefits of the ACS, as well as reducing or modifying statements about the mandatory nature of the survey.

Control Design Treatment – The mail materials in this treatment have no revisions to the mandatory messages. Building on previous tests conducted in March and April of 2015, there will be no pre-notice letter used in this treatment and a reminder letter will be sent instead of a reminder postcard. The multi-lingual brochure will not be sent in the mail package for this test. These changes to the production materials minimize confounding effects with the other experimental treatments.

Softened Mandatory Messaging Treatment – This experimental treatment builds on the control design treatment. Mandatory messaging on envelopes, postcards, letters, and brochures is removed or softened. We softened emphasis on the mandatory message by using plain text instead of bold text and including the mandatory message in sentences with statements about the benefits of the survey.

Design Treatment – This experimental treatment primarily uses materials designed as a result of the messaging and mail package assessment research that the Census Bureau conducted with elements that are intended to better emphasize the benefits of participation in the survey. As with the previous two treatments, we will not mail a pre-notice letter to respondents and a reminder letter will be sent instead of a reminder postcard. The multi-lingual and FAQ brochure (which were redesigned) will not be sent in the mail materials for this test in order to test recommendations from external experts that we should

⁴ The final report “American Community Survey Messaging and Mail Package Assessment Research: Cumulative Findings” can be found on the Census Bureau’s website at:
http://www.census.gov/acs/www/Downloads/library/2014/2014_Walker_02.pdf.

significantly streamline the set of materials included in each package. Additionally, the time needed to develop and print these materials would delay the test from being implemented as quickly as possible. Some information contained in the FAQ brochure will be included in the other mail materials.

Softened Design Treatment – This experimental treatment builds on the Design Treatment. Mandatory messaging on envelopes, postcards, and letters are removed or softened. We softened emphasis on the mandatory message by using plain text instead of bold text and including the mandatory message in sentences with statements about the benefits of the survey.

Minimal Design Treatment – This experimental treatment builds on the Design Treatment. Mandatory messaging on envelopes, postcards, and letters is minimized by removing all references to the mandatory requirement except for the letter in the initial package. We are required by the Paperwork Reduction Act of 1995 to let the respondent know that the survey is mandatory. The initial package letter will have one reference explaining the mandatory nature of the survey on the back of the letter.

We have divided the monthly production sample of 295,000 addresses into 24 nationally representative groups of approximately 12,000 addresses each. For this test, planned for the September 2015 ACS panel, we will use two randomly assigned groups for the each of the experimental treatment groups. As we are using production cases for the test, the test will run through the complete three-month data collection period.

Our primary evaluation measure for this test is the self-response rate. Additional metrics of interest include total response rate, the impact on hard-to-count groups, and the impact on ACS estimates. We will also conduct a cost analysis and examine CATI and CAPI workloads, including the number of visits needed to gain cooperation.

d. Milestones

| Milestone | Date |
|--|----------------------------------|
| Conduct the Envelope Mandatory Messaging Test | May through July 2015 |
| Conduct testing of softer mandatory messaging | September through November 2015 |
| Complete preliminary analysis of Envelope Mandatory Messaging Test results | August 2015 |
| Complete preliminary analysis of testing of softer mandatory messaging | December 2015 |
| Final reports available | Early 2016 |
| Census Bureau proposes changes to production materials based on test results | TBD in 2016 pending test results |

5. Evaluating Modifications to Survey Questions

a. Background

As part of its continual reassessment of the ACS, in early 2013, the Census Bureau began working with the Office of Management and Budget (OMB) Interagency Committee for the ACS to develop ideas from Federal agency data users for revisions to existing ACS questions or potential new content for the survey. Some questions were identified for revision in order to improve the quality of the data collected, or to improve respondent understanding of the topic being measured. For example, given the quickly evolving nature of computer and internet technology, the survey questions on these topics first introduced in the 2013 ACS contained wording that quickly became outdated. Updated terminology is needed to help respondents easily understand the question and provide quality responses.

Preparations have been underway to cognitively test proposed revisions to many questions on the survey in preparation for a planned 2016 field test of some of these wording changes. Additionally, during the course of the 2014 ACS Content Review, metrics were collected to identify the level of burden associated with each question currently included in the survey. These metrics included measures of the time it takes to respond, the cognitive burden, sensitivity, difficulty, number of complaints referring to that topic, and the item level response rates.⁵ This created an opportunity for the Census Bureau to consider additional changes that may be helpful in addressing respondent concerns for individual questions or reduce the difficulty or burden associated with providing a response. The justifications provided by Federal agencies for asking some of the ACS questions provided a clear basis for collecting information on a given topic, but may not necessarily require that we collect that information through asking each of the current questions related to that topic.

b. Preparing for the 2016 ACS Content Test

In response to Federal agencies' requests for new and revised ACS questions, the Census Bureau plans to conduct the 2016 ACS Content Test, pending the receipt of necessary funding in fiscal year 2016. Changes to the current ACS content and the addition of new content were identified through the OMB Interagency Committee for the ACS, and must be approved for testing by the OMB. The objective of the 2016 ACS Content Test is to determine the impact of changing question wording, response categories, and redefinition of underlying constructs on the quality of the data collected. Revisions to twelve questions/topics are proposed for inclusion in the 2016 ACS Content Test:

- Telephone Service
- Computer and Internet
- Relationship
- Race and Hispanic Origin
- Health Insurance

⁵ Chappell, G. and Obenski, S, "Final Report: American Community Survey (ACS) Fiscal Year 2014 Content Review Results." See http://www.census.gov/acs/www/Downloads/operations_admin/2014_content_review/Methods%20and%20Results%20Report/2014_ACS_Content_Review_Final_Documentation.pdf

- Health Insurance Premium and Subsidies (new questions)
- Journey to Work: Commuting Mode
- Journey to Work: Time Left for Work
- Number of Weeks Worked
- Class of Worker
- Industry and Occupation
- Retirement Income

The initial stages of the ACS Content Test consisted of content determination and cognitive laboratory pretesting through iterative rounds conducted in 2014 and 2015 for developing alternate versions of question content identified for field testing in 2016. Representatives from numerous Federal agencies, as well as other data users, contributed to these early pretesting efforts by providing their subject matter expertise. The 2016 ACS Content Test will consist of a national sample of 70,000 residential addresses in the United States (the sample universe does not include Puerto Rico, remote Alaska, or U.S. territories) with half receiving the modified set of questions and the other half receiving the current version of the questions. Administering the survey in the midst of a test allows us to practice agility in action. In addition to the field test, the ACS Content Test will also include a telephone follow-up content re-interview as a method for collecting additional data quality measures. The results of the 2016 ACS Content Test will inform proposed changes in content for the 2019 ACS. Note, as appropriate, incremental changes may be introduced earlier than the 2019 collection year.

c. Testing Additional Question Wording Changes to be Responsive to Environmental Changes and to Reduce the Burden or Difficulty of Questions

In order to be responsive to environmental changes that make questions on the ACS out-of-date or challenging for respondents, the Census Bureau is examining ways to research question changes in a more agile manner. For example, as mentioned in the previous section, the speed with which technology changes has caused challenges for respondents to answer the ACS questions on computers and Internet service. Additionally, for each survey question determined to have high burden from the scoring done in the 2014 ACS Content Review⁶, the Census Bureau will examine the questions for likely sources of difficulty, sensitivity and burden. The Census Bureau will then determine potential question revisions that may reduce this burden, and will then engage a broader set of Federal data users, including the OMB Interagency Committee for the ACS, to develop recommendations for question modifications.

In looking for ways to be more responsive and timely in introducing changes, yet remaining in harmony with Census Bureau quality standards, the Census Bureau would identify an approach to qualitatively assess (e.g., cognitive testing) the question modifications that are proposed. The research may be conducted in multiple rounds, and should include assessment of English and Spanish question changes, as well as mode-specific changes as appropriate and feasible. Once wording changes have been refined through iterative rounds of cognitive testing in late 2015 and early 2016, in consultation with the OMB

⁶ See "Final Report: American Community Survey (ACS) Fiscal Year 2014 Content Review Results" for a discussion of the burden scores, available at: http://www.census.gov/acs/www/about_the_survey/methods_and_results_report/

and the Interagency Council on Statistical Policy Subcommittee for the ACS, the Census Bureau will identify an appropriate means for field testing the questions, if necessary. This field testing would quantitatively assess the performance of the revised questions in late 2016 or early 2017, pending the receipt of adequate funding. Question wording changes could then be implemented into production at the earliest opportunity once the research has demonstrated the changes are effective.

d. Milestones

| Milestone | Date |
|---|--|
| Complete cognitive testing of proposed question wording changes for the 2016 ACS Content Test | June 2015 |
| Work with Federal agency data users to develop proposed wording changes for an additional set of questions with high respondent burden | Summer 2015 |
| Conduct iterative rounds of cognitive testing for an additional set of questions with high respondent burden | Starting in September 2015, and continuing as needed |
| Conduct fieldwork for the 2016 ACS Content Test | March – June 2016 |
| Conduct fieldwork to quantitatively assess the performance of the revisions to an additional set of questions with high respondent burden | Late 2016 or early 2017 |

6. Evaluating Methods to Ask Questions Less Frequently or of Fewer Respondents

a. Background

The current design of the ACS asks all of the survey questions from all sampled households every year. However, the 2014 Content Review identified several opportunities to include some questions periodically, rather than asking every question, every year. For example, one question asks about the sale of agricultural products from a household’s property. Data related to this question are only needed by the Department of Agriculture once every ten years, meaning we do not need to ask it every year.

Methods such as “matrix sampling”⁷ may allow the Census Bureau to meet data needs with reduced burden on ACS respondents.

b. Assessing the Feasibility of these Methods

Census Bureau staff will review the responses provided by other Federal agencies related to the needed frequency of the data for their uses, as well as the geographic levels needed. This will lead to the identification of the set of topics or questions where potential reductions in the frequency of collection or sample size needed may exist. With this information, the Census Bureau will identify possible designs for asking fewer questions of individual respondents, such as matrix sampling, while still meeting the data needs of our Federal users. Possible design changes may also include revising the questionnaire from year to year to bring questions on and off the survey as needed in accordance with the frequency of the data need. Other potential changes include fielding multiple versions of the questionnaire simultaneously so that some households are asked fewer questions than others while still yielding sufficient data for producing estimates for the geographic areas each year that match the Federal agency’s needs for that topic. Combinations of these approaches with enhanced item imputation or through folding in alternative data sources may also be possible. Although these options would be designed to reduce the number of questions that an individual household selected for the survey would be asked, there would be challenges in the complexity of the operational and statistical methods used to collect and release data. Some possible designs may have an impact on the accuracy of the data released or the richness of the data products produced. Therefore, the Census Bureau will prepare initial reports outlining the statistical and operational feasibility of these approaches, and potential impacts to respondents and data users.

The Census Bureau will consult with statistical experts on this and other topics related to respondent burden to receive their input on these feasibility assessments and solicit ideas for additional survey designs that reduce burden. Given the criticality of the ACS data, it is important for the Census Bureau to communicate with stakeholders including data users to share our intention to research these options.

c. Milestone Schedule

| Milestone | Date |
|---|--------------------|
| Develop initial set of design options and high-level impacts for each | May 2015 |
| Seek broader Census Bureau input on initial set of design options | June and July 2015 |

⁷ Matrix sampling is a sampling design that involves dividing a questionnaire into possibly overlapping subsets of questions, and then administering these subsets to different subsamples of an initial sample.

| Milestone | Date |
|---|-------------------------------|
| Deliver initial reports outlining the statistical and operational feasibility of these approaches | September 2015 |
| Discuss feasibility reports with Federal agency stakeholders and data users to obtain feedback | October through December 2015 |
| Hold NAS workshop of experts to provide additional input into options | February 2016 |

7. Communicating with Respondents on Why We Ask Questions

a. Background

Respondents sometimes ask about why the Census Bureau needs to ask the specific questions on the ACS questionnaire, and so to satisfy their understandable curiosity, we’ve developed some materials to give them the answers. Having a better understanding of why we ask the questions and how the data from their responses to each question are used to benefit their community has shown to be an effective means of addressing respondent concerns with the sensitive nature of some questions. During data collection operations that involve a Census Bureau interviewer, the interviewer can provide information to address respondent concerns about why we ask certain questions and how the data are used. However, when responding to the survey by Internet or by mail, the respondent has fewer tools available to obtain information about why we ask the survey questions. Therefore, the Census Bureau will explore additional tools and materials to provide relevant information to respondents to address these concerns.

b. Testing Additional Information in the Mail Questionnaire Package

One approach will be to test the addition of information on why we ask questions into the mail package that accompanies the paper questionnaire. We will develop an additional mail piece that would be inserted in this package to draw the respondent’s attention to information about why we ask some of the survey questions that frequently are of interest to respondents, and examples of how the data are used to benefit their communities. During a test conducted in November 2015, we will test the inclusion of this additional piece in the mailings sent to a subset of the monthly production sample, while the remaining cases in that panel will comprise the control and receive standard ACS mailings without this additional piece included. As we are using production cases for the test, the test will run through the complete three-month data collection period. Our primary evaluation measure for this test will be the self-response rate, and the item non-response rates for the topics included in the additional mail piece.

c. Expanding Information on Why We Ask Questions for Internet Respondents

The current Internet version of the ACS questionnaire includes links for “Help” on the pages for survey questions. When a respondent clicks on these links, a pop-up window provides information including how the data for the question are used, and any special definitions or instructions that may assist the respondent in answering the question. The Census Bureau is developing other web pages with expanded information about why we ask each question, and is examining other methods to provide links to these pages in the Internet version of the ACS questionnaire. We will conduct usability lab testing of the modified Internet version of the questionnaire with these links to the expanded information about why we ask questions to ensure that respondents can easily find this information, and easily return to the questionnaire to complete the survey.

d. Providing Additional Tools on Why We Ask Questions to Interviewers

The automated survey questionnaire used during personal visit interviewing provides interviewers access to information about why we ask the questions, which the interviewer can use to address respondent concerns and questions as needed during the course of the survey interview. Additional paper materials are being developed for the ACS interviewers to use in their interactions with respondents to provide additional information in an easy to digest format, so that we may satisfy the curiosity of respondents who want to know why we ask the questions on the ACS.

e. Milestone Schedule

| Milestone | Date |
|--|------------------------------------|
| Provide personal visit interviewers with additional paper materials for respondents on why we ask survey questions | September 2015 |
| Conduct lab testing of enhanced information on why we ask questions for Internet respondents | Late 2015 |
| Conduct test of additional insert for paper questionnaire mail package | November 2015 through January 2016 |
| Complete preliminary analysis of test results | March 2016 |
| Final reports available | Summer 2016 |

8. Data Use Awareness

a. Background

The Census Bureau’s adaptability to emergent trends is partially reliant on developing a greater awareness of the volume, variety and sophistication of current uses of ACS data. The 2014 Content Review provided a detailed initial collection of Federal uses, and a recent contract provided a detailed

initial set of non-Federal uses. Combined, these nearly 1,000 Federal, Tribal, state, local, research, media and business uses suggest that ACS data are used widely within the U.S. and abroad to allocate funds; identify the needs and interests of specific populations; provide context to emerging trends; benchmark other statistical, administrative, and business data; and ensure that decision makers in all settings have the information they need. Other research and new documents like “The Value of the American Community Survey: *Smart Government, Competitive Businesses, and Informed Citizens*”⁸ produced by the Economics and Statistics Administration also speak in depth about the varied uses of the data produced by the ACS.

The Census Bureau is currently examining these collected uses in an effort to determine what information is valuable to catalogue. We also plan to develop a streamlined and sophisticated method of pursuing, documenting, validating and sharing these examples. This new method will be quick and agile while providing the information crucial to understanding these uses.

Preliminary conversations with current users and potential users suggest that sharing examples from similar industries or of groups facing similar challenges may inspire additional uses and greater sophistication of those uses. Additionally, a greater awareness of how users access and analyze ACS statistics can inform future decisions about data products, dissemination channels, and educational products.

b. Collecting Current Use Cases through Engagement of ACS Data Users

We plan to consult with the following groups in order to develop a larger volume of uses from a more comprehensive set of sources including:

Government (Federal, Tribal, State, Local) – Through current and future collaboration with Federal agencies, we plan to continue adding detail and additional emerging uses to the uses shared as part of the 2014 Content Review. Additionally, through Federal agencies, conference exhibits, and research, we have learned that many of the Federal uses are also present in a smaller scale at the Tribal, state, and local level.

Business – Through user support, conference exhibits, and Internet research, we are learning of a wide variety of business uses that encompass everything from basic market research, site selection, and workforce planning, to validating information in business negotiations, and creating value-added datasets by combining ACS statistics with other information.

Media – A daily review of ACS clips shows many media outlets using ACS information to provide context to news stories, create visualizations and maps, and identify local area trends.

Non-profits, Grant Writers and Advocacy Groups – Through user support, conference exhibits, and Internet research, we are aware of non-profit entities using ACS to identify populations in need or

⁸ Regina Powers, David Beede, and Telles Jr., April 2015.

populations of interest, apply for funding that supports projects for small population groups or local areas, and add context to policy decisions that may have disparate impacts on certain groups.

Research – Through user support, conference exhibits, and Internet research, we are aware of the wide variety of research in many fields beyond the expected demographic and economic interests.

With this larger volume of uses, we plan to seek greater understanding of the known uses, additional uses in these categories, and additional uses in new categories through continued conversation with data users and potential data users. This engagement will be conducted through a variety of methods:

Conferences – Attending, presenting, and exhibiting at a variety of government, business, trade association, research, and non-profit conferences allows Census Bureau staff to learn more about existing uses, learn of new uses, begin conversations with users that can be continued over time, and inspire future users with current use examples.

User Support – Data users seeking clarification about terms, methods, and documentation reach out to Census Bureau staff via several channels including email, phone calls, in-person consultation, and website feedback. In that engagement, staff often learn more about how an individual is planning to use ACS data and can capture that information or begin a conversation that can be continued over time. These conversations also help us ensure that information is available in the variety of formats currently in use (tables for quick statistics, georeferenced files for maps, API format for more sophisticated applications, etc.).

Internet Research – Regular reviews of media stories, Internet searches, user forums, etc., allow Census Bureau staff to get a broad sense of uses that can be further investigated through personal contacts with authors, application developers, businesses, and researchers.

Tool to Submit Uses – Establishing a method for all Census Bureau staff (data dissemination staff, regional office staff, field representatives) and partners (state data centers, census information centers, etc.) to contribute to the collection of uses based on information from their contacts and interactions.

By streamlining and standardizing the output of these sources of uses, we hope to quickly and effectively make these important and emerging uses available for everyone to further inspire innovative ACS data uses.

c. Sharing Current Use Cases

The Census Bureau currently provides examples of ACS uses through a video series (<http://www.census.gov/programs-surveys/acs/about/survey-is-mandatory/acs-helps-communities.html>), testimonial videos, promotional materials, and generalized examples in publications. We plan to use the expanded set of uses collected to provide more detail in these products. We will also investigate how to provide more comprehensive information about uses on our website.

d. Engagement of ACS Data Users Group

The Census Bureau will also continue to support the ACS Data Users Group, which provides an opportunity for more than 1200 engaged ACS data users to network with other data users through an online community of practice, conferences, webinars, and other channels beyond what the Census Bureau provides.

e. Milestone Schedule

| Milestone | Date |
|--|----------------------------|
| Define requirements for collected uses | August 2015 |
| Participate in conferences to communicate with users | Ongoing in 2015 and beyond |
| Develop materials and products to communicate use examples | Ongoing in 2015 and beyond |

9. Subject Matter Expert Engagement

a. Background

The Census Bureau is seeking the assistance of experts to respond to concerns of the public and Congress about the actual and perceived burden of the American Community Survey (ACS) questionnaire and the communication and follow-up procedures with respondents.

b. National Academy of Sciences (NAS) Engagement

One approach will be to work with the National Academy of Sciences Committee on National Statistics to conduct a public workshop and four expert meetings by spring 2016. The committee of experts will also advise on approaches that the Census Bureau is currently investigating, including matrix sampling, administrative records for direct substitution, communication and mail package messaging, and group quarters questionnaire content. The workshop will be organized by a separately appointed workshop steering committee and will produce a publicly released report – a workshop summary with findings and recommendations as appropriate.

The Census Bureau intends to create a steering committee of experts to include a minimum of 15 to a maximum of 25 members with the National Academy of Sciences. The steering committee should include experts in areas such as census and survey methods and operations; small area estimation, statistical modelling, large-scale imputation including variance estimation, time series, administrative records usage, survey messaging and communication, matrix sampling, questionnaire design and survey design. The steering committee will include not only members who are familiar with census processes from previous census-related work, but new members to strengthen specific areas of expertise that have become critical to planning for the ACS.

c. Engagement of Other External Experts

The Census Bureau will also seek input from other external experts on various topics through contract and non-contract means. Experts in the field of survey methodology have been consulted on methods to soften the presentation of mandatory messages during the development of the mail package research, and their input influenced the design of the tests and the specific changes made to individual mail pieces. Other statistical experts will be solicited via contract to provide assistance in ongoing research into the development of sub- annual estimates. We also will consult with behavioral scientists to obtain insights into what messages in ACS respondent materials could better help persuade individuals to respond.

d. Milestone Schedule

| Milestone | Date |
|--|-----------------------------|
| Consult external survey methodology experts on mandatory messaging | April 2015 |
| Award NAS contract | July 2015 |
| Conduct NAS public workshop | January 2016 |
| Conduct NAS expert meetings | February through April 2016 |

10. Respondent Advocacy

a. Background

The position of Respondent Advocate is another manifestation of the Census Bureau’s agility in action and was established in April 2013 upon direction from Congress. The general mission of the role is to advocate for respondents in development and review of survey content and methods, as well as to raise awareness of respondent concerns during the conduct of all censuses and surveys. The Respondent Advocate also functions as an Organizational Ombudsman to assist respondents, including outreach and educational activities-all within 48 hours of receiving a complaint.

Mr. Timothy Olson served as the Census Bureau’s first Respondent Advocate, serving from April 2013 to October 2014. While in this capacity, Mr. Olson conducted outreach to 429 Congressional Offices to provide information about the ACS and the Respondent Advocate position. He also provided direct assistance to respondents and supported development of the “Respect the Respondent” training module for ACS field interviewers

A new Respondent Advocate was named in February 2015, Mr. David Waddington. He will continue his predecessor’s efforts to conduct outreach and educational meetings with key stakeholders and Members of Congress.

Mr. Waddington will also participate in future activities stemming from the 2014 ACS Content Review to ensure respondent concerns and survey burden are addressed. Similarly, he will advise the ongoing efforts of the ACS Messaging Research Team.

Still other activities the Respondent Advocate will undertake include documenting current processes used to address respondent requests/complaints regarding survey participation, reviewing the survey life cycle processes for enhancements to improve respondent interactions, and making enhancements to the *Are You in a Survey* webpage. This latter effort includes the addition of a *Respondent Advocate* page.

Mr. Waddington will also work to integrate improvements from ACS into activities for Current Surveys and vice versa. For example, rolling out the Respect the Respondent training to Field Representatives who work on current surveys but not the ACS.

b. Milestone Schedule

| Milestone | Date |
|--|---|
| Conduct outreach and educational meeting with key stakeholders and Members of Congress | Ongoing (ramping up in September 2015 and beyond) |
| Participate in the ACS Content Review process | Ongoing |
| Advise the ACS Messaging Research Team | Ongoing |
| Document processes to address respondent requests/complaints | TBD |
| Enhance the <i>Are You in a Survey</i> webpage | Ongoing |
| Ombudsman for Respondents | Ongoing |
| Propose process/method improvements based on respondent feedback and review of SLC activities. | Ongoing |

11. Communication Strategy

a. Background

Given the criticality of the ACS data, it is important for the Census Bureau to communicate with stakeholders including data users to share our intention to research alternative methods through all phases of the project. In an ever-changing environment, the communications must be agile and impactful.

As mentioned earlier, these projects are pieces of a large effort to address respondent concerns with the ACS, and the Census Bureau will need to share potential changes to the ACS related to these

projects with stakeholders. Communication experts will develop a detailed outreach strategy and plan outlining our approach to include key stakeholders in the process by keeping them abreast of our progress, and providing them with an opportunity to offer input.

At a minimum, Census Bureau staff will present in public forums to seek input on the various research plans, as well as share the incremental findings at various stages of the project. Potential opportunities include the meetings such as the Association of Public Data Users (APDU), Population Association of America (PAA), ACS Data User Conference, Federal Committee on Statistical Methodology (FCSM), American Association of Public Opinion Research, etc.

The research findings will drive recommendations to changes in ACS methodology. Once the Census Bureau determines the best approach, we will solicit public comments through a *Federal Register* Notice on the proposed changes to the ACS methods, and the potential removal of any survey questions from the questionnaire.

b. Milestone Schedule

| Milestone | Date |
|--|----------------------------|
| Participate in conferences to communicate with stakeholders on research plans and findings | Ongoing in 2015 and beyond |
| Deliver communication plan for Federal stakeholders and data users | September 2015 |
| Publish <i>Federal Register</i> Notice for any proposed 2017 changes | October 2015 |

12. Conclusion

The Census Bureau recognizes that the ACS is a conduit of vital information used by government, businesses, academic institutions, and non-profits to help our nation make informed decisions. Yet the ever-changing environment demands that the ACS remain agile so that it keeps pace with change, provides the best quality data possible, and delivers the best possible experience to its customers—respondents and data users alike. For the Census Bureau, agility in action is the ability to adapt to emergent issues and trends without sacrificing quality, and it’s something we are deeply committed to foster in everything that we do.

Over the next year, we will show our agility through a number of key activities that are all designed to make the survey and the survey experience better. As we endeavor to deliver a survey that is trusted and valued by the nation as the source for quality demographic, social, economic, and housing information on small areas and small populations, we’ll be working to identify records collected by other federal agencies that could allow us to remove questions from the survey, collaborate with experts to improve survey procedures and packaging, help our customers understand why we need the data we

ask for from them, continue our commitment to respondent advocacy, and deepen our understanding of how people use ACS data.

It's not surprising that such a comprehensive data source like the ACS would attract the attention of a great many people and organizations with varied interests and concerns. We look forward to continued conversations with all as we keep enhancing the survey and its procedures to best meet the needs of our country.