

2020 Census Program Management Review

Program Status Reports

NOTE: The following status slides were compiled from the 2020 Census Monthly Status Reports (MSR) for December 2013, January 2014 and February 2014, along with annotations by the 2020 Program Managers, where additional context would be helpful.

March 28, 2014

2020 Census Program Status Report

- The following status slides were compiled from the 2020 Census Monthly Status Reports (MSR) for December 2013, January 2014 and February 2014, along with annotations by the 2020 Program Managers, where additional context would be helpful.
- Summary level information about program risks is provided in this report, project level risk information can also be obtained by contacting Charles Fowler III or Michael Niosi of the 2020 Research and Planning Office and Decennial Management Division.
- Questions can be sent to 20rpo.program.management@census.gov. We will reply in writing to questions received by April 18, 2014.

Table of Contents

	Page
Status of Major Tests	5
Status on Major Cost-Saving Research Tracks	12
Optimizing Self-Response	
Administrative Records for Nonresponse	
Reengineered Field Automation and Operational Infrastructure	
Reengineered IT Infrastructure	
Continual Address Frame Updating and Targeting	
Additional Updates	19
Program Schedule Metrics	22
Program Risks	24

Overall Program Status & Major Issues

Overall Program Status

1. The 2020 Program developed the next iteration of life cycle cost estimates, by year, to show a best case scenario for the total cost of the 2020 Census. Estimates have been developed for the potential savings that can be realized pending the completion of research into the following components of the Census:
 - Conducting address listing only in specific locations rather than walking every street in the country;
 - Leveraging the Internet to the greatest extent possible for self response;
 - Reengineering field operations leverage adaptive design methodologies, dynamic case management, route planning, and other methodologies to significantly improve worker productivity;
 - Using data already provided to the government to reduce the number of interviews that must be conducted with households that do not respond to the census; and
 - Leveraging corporate IT solutions including the possible use of "bring your own device" methodologies.

The life cycle estimates will be included in the President's budget submission that will soon be delivered to Congress.

2. Since chartering in September 2013, portfolio governing boards for the 2020 Census program have met weekly to chair periodic Investment Management Reviews and to examine and decide on new work requests. The portfolio governance process leverages use of the Enterprise Systems Development Life Cycle process and templates, and continues to evolve to maximize compliance with the corporate model. Projects with an IT investment component are governed by a joint 2020 Program and IT Directorate board.
3. We have addressed all the projects that were placed on hiatus due to the FY 2014 Continuing Resolution. Some are re-activated to continue their research and testing while others will have their scope subsumed into existing active projects. We have started new FY14 projects: Island Areas Integration and Internal Controls, Puerto Rico Integration and Internal Controls, Special Populations Integration and Internal Controls, 2014 Census Test Implementation, and Nonresponse Followup Design and Operations.
4. The 2020 Census Program conducted a program integration workshop on January 15-17 to further mature the Research and Testing Phase decision points and deliverables and ensure that the research is tied to the key cost reduction assumptions in the 2020 Rough Order of Magnitude lifecycle cost estimate.

Major Issues

There are no major issues to report.

Status of Major Tests

Test Descriptions and Status

2013 Census Test

Description

We are examining the operational feasibility of the use of administrative records to reduce NRFU workload and an adaptive contact strategy to increase nonresponse followup (NRFU) productivity. We conducted NRFU operations November 2 to December 4, and are currently analyzing the data.

Summary of Activities

1. Began analyzing results of the test to inform procedures for the 2014 Census Tests (e.g., treatments, systems testing).
2. Debriefed on managing adaptive design in the field with supervisors from the Philadelphia Regional Office
3. Discussed preliminary results of the test at the Regional Directors' Meeting.

Look Ahead

1. Complete the draft assessment report which will include analysis of case completion by mode, enumerator compliance, model evaluation, operational findings across entire test, number of contact attempts, and costs..
2. Discuss preliminary result of the test at the March Performance Management Review and the 2014 Federal Computer Assisted Survey Information Collection Workshop.
3. Complete the analysis of the test results.
4. Prepare preliminary results on the use of contact frame data used for the test.

Test Descriptions and Status

2014 Census Test (1 of 2)

Description

We will test self-response and nonresponse field components to obtain results to answer research questions to inform preliminary design decisions for the 2020 Census. The scope of the test includes: incorporating the testing of the self-response modes and the contact strategies for pre-registration; e-mail and automated voice invitations; testing of the mobile devices that are used for followup enumeration with non-responders in the field; testing of alternative contact strategies (telephone or personal visit) for non-responders; using administrative records to remove cases from the non-responding workload; and applying adaptive design methodologies in managing the way field enumerators are assigned their work.

Summary of Activities

1. Completed key Information Technology related activities in support of the test. Activities included:
 - Implemented the System Engineering and Integration Change Request process to track changes to the baseline requirements for the test.
 - Completed development of the gate review/readiness process that aligns with the Enterprise System Development Lifecycle to monitor and ensure the readiness of systems for the test.
 - Implemented five working groups to ensure all details and testing surrounding key interfaces for the test are documented. These working groups address the interfaces of the following key systems: Universe Control and Response Management, Unified Tracking System, Research and Testing Operations Control System, Master Address File/Topologically Integrated Geographic Encoding and Referencing System, National Processing Center, and Center for Economic Studies.
2. Began adjudicating comments received from the review of Spanish translations of materials and questionnaire content.
3. Reviewed and revised format of reports being produced by the Unified Tracking System.
4. Began examining administrative record coverage in sample areas.
5. Began work on creating the adaptive design model.
6. Completed the Census Operations Mobile Platform for Adaptive Services and Solutions (COMPASS) implementation to limit personal visits to a single visit for pre-specified cases (as opposed to one day's worth of visits).
7. Began the second systems test for the nonresponse followup systems that include: COMPASS, Research and Testing Operational Control System (RTOCS), Unified Tracking System, Universe Control and Management, Decennial Applicant Payroll and Personnel Systems, and Master Control System in addition to testing of the adaptive design business models in support of nonresponse followup.
8. Published the OMB clearance pre-submission notice in the Federal Register on December 24. The 60-day comment period ended on February 24.
9. Baselined the schedule.
10. Selected an e-mail/text provider system.
11. Baselined the 2014 Census Test Plan.
12. Began work on the Operational Readiness Plan.

Test Descriptions and Status

2014 Census Test (2 of 2)

Look Ahead

1. Build the associated interfaces and specifications for the e-mail/text provider.
2. Begin to provide the requirements and technical specifications for printing of the test materials to the National Processing Center and the Government Printing Office.
3. Begin finalizing materials, including letters, envelopes, postcards, and questionnaires.
4. Finish the review of Spanish translation of materials and questionnaire content.
5. Process new commercial contact vendor data from FY 2013 Q4 for inclusion in the contact frame in time for use in the test.
6. Prepare technical specifications and get system ready to (1) append phone numbers and emails addresses from the contact frame and (2) conduct a phone service check on landline phone numbers from the contact frame.
8. Finish work with the e-mail/text provider system to ensure paradata (such as sent, delivered, undeliverable, etc.) are available for evaluation purposes.
9. Baseline the Administrative Records Modeling specification.
10. Complete the second systems test for field enumeration.
11. Implement Enterprise Systems Development Lifecycle Gate Review process for system providers to ensure readiness for the test.

Test Descriptions and Status

Master Address File (MAF) Model Validation Test

Description

We will conduct a national-level address listing test. This will enable us to develop and test our ability to use statistical modeling to measure error in the MAF and to identify areas experiencing significant change so that we can target our pre-census address canvassing operation.

Summary of Activities

1. Completed listing check plan (quality check)
2. Completed cost estimate based on new listing check assumptions
3. Prepared scenarios for systems test

Look Ahead

1. Perform systems test
2. Implement new staff testing

Test Descriptions and Status

Small-Scale E-mail Contact Testing

Description

We will begin answering some fundamental questions on optimizing the content and methods of contacting respondents through e-mail. There will be three phases. Phase 1 will attempt to empirically research the optimal design of e-mails to generate response with a sample of respondents who have opted-in to do research with the Census Bureau. If Phase 1 is successful (i.e., having at least some minimal level of response), the most promising designs from Phase 1 will be replicated with a cold-contact sample in Phase 2. Phase 3 will take the methods we have established in the earlier phases into the field for the 2014 Census Test.

Summary of Activities

Phase 1:

1. Began analyzing results from the the proof-of-concept test of two different e-mail subject lines, and two versions of address collection screens.
2. Submitted OMB generic clearance request for subsequent testing of email subject lines, format of emails, content of emails, and timing of reminder emails in advance of the 2014 Census Test.

Look Ahead

Phase 1:

1. Finish analyzing the findings from the proof-of-concept test. Plan validation test to confirm results of the proof-of-concept test.
2. Receive OMB generic clearance for planned testing (of email subject lines, format of emails, content of emails, and timing of reminder emails) in advance of the 2014 Census Test.
3. Plan and conduct first field test (which only will test email content) under the existing OMB generic clearance for pretesting.

Test Descriptions and Status

Local Update of Census Addresses (LUCA) Focus Groups

Description

We will obtain feedback on potential LUCA models for 2020 through a series of focus groups with LUCA participants. Focus groups will consist of eligible LUCA participants in various geographic areas representing various sizes and types of governments. Issues to discuss may include LUCA participation options (2010 LUCA Options 1, 2, and 3), media options (paper, electronic), and if/how the Geographic Support System Initiative impacts how they might participate in 2020 LUCA. The results will help determine whether a broader survey of all local, tribal, and state governments will be needed.

Summary of Activities

1. Narrowed the search for focus group sites to 7 conferences, where tribal, state and local governments will meet (between March and June).
2. Finalized the topics for discussion and high level questions that will be asked during the focus group sessions.

Look Ahead

1. Develop the detailed focus group questions, including follow-up (probing) questions.

Status of Major Cost-Saving Research Tracks

Research Status

Optimizing Self-Response

Description

We are examining ways to leverage technology, variation in demographic/geographic response propensities, and new response modes to increase self-response while maintaining overall quality. This includes the development of the Supplemental Contact Frame to support contact strategies such as phone and e-mail.

Summary of Activities

1. As mentioned on slide 7, reviewed and revised format of reports being produced by the Unified Tracking System in support of the 2014 Census Test.
2. Conducted technical exchange meetings in early December 2013 to understand the interfaces between the Census Bureau IT developers and developers for Criterion/ID DataWeb (National Strategy for Trusted Identities in Cyberspace pilot). The National Strategy for Trusted Identities in Cyberspace collaboration could support our electronic contact strategies (outbound) as well as enhance Internet authentication, by enabling data collection for respondents without a user ID or access code.
3. Analyzed the initial results of the use of contact frame data that we provided to the American Community Survey Office for the November panel of the American Community Survey, as well as the 2013 Census Test contact frame data. Landline phones are being used to contact respondents in December 2013, who did not respond to initial requests for paper or Internet responses in November 2013. The results of the contact attempts using these phone numbers will help to evaluate the contact frame and improve its use for 2020 testing purposes.

Look Ahead

1. Finalize the budget support, architecture, and design for the real-time matching and geocoding functionality to be used in the 2015 integration test.
2. Develop a survey to ask Census Bureau headquarters employees about the quality of the contact frame data received from commercial vendors for their home address. This internal test will help us to better understand the quality of the contact data that we obtain from commercial vendors
3. Regarding the 2014 Census Test:
 - Build the associated interfaces and specifications for the e-mail/text provider.
 - Begin to provide the requirements and technical specifications for printing of the test materials to the National Processing Center and the Government Printing Office.
 - Begin finalizing materials, including letters, envelopes, postcards, and questionnaires.

Research Status

Reengineering Nonresponse Followup (NRFU)

Description

We are developing a method to reduce costs of the nonresponse followup operation while maintaining the quality of the information collected by relying on the use of administrative records and an adaptive contact strategy for field work. We are researching the utilization of existing administrative records to identify unoccupied housing units that could be enumerated without a visit and occupied housing units that could be enumerated with fewer to no visits during a nonresponse followup operation. We are also researching ways to adapt the order and number of contact attempts made at households during field operations, based on information available before and during the data collection period.

Summary of Activities

1. Conducted the first of multiple discussions with U.S. Postal Service (USPS) on the undeliverable as addressed (UAA) information they provide, as this information is key to our verification of vacant housing units in administrative records. This first meeting was to better understand the USPS process for identifying and processing UAAs. Future discussions will include sharing our results from the various test and working with them to determine if any enhancements could be made to support our use of the data.
2. Regarding the 2014 Census Test:
 - Began examining administrative record coverage in sample areas.
 - Began work on creating the adaptive design model to be used in production.
 - Began participation in the second systems test for nonresponse followup systems.

Look Ahead

1. Begin research on count and characteristic imputation approaches for handling unresolved cases due to either administrative records usage or reduced NRFU contacts.
2. Begin research and analysis of the performance of simulating the use of administrative records on non-respondents for ACS.
3. Regarding the 2014 Census Test:
 - Baseline the administrative records modeling specification.
 - Complete participation in the second systems test for nonresponse followup systems.

Research Status

Reengineered IT Infrastructure

Description

We will leverage the Census Bureau's Enterprise systems and solutions to support IT services, data capture, data processing, and data dissemination. We will provide insight into requirements and business rules needed to develop systems for IT solutions that will support the 2020 Census. We will support development of requirements, management of systems readiness, and testing for the 2014 Census Test and subsequent testing in 2015.

Summary of Activities

1. Received approval from the 2020 Project-Level Portfolio Management Governance Board approval for two projects to move into the Concept Development Phase: (1) 2020 Census Paper Data Capture Solution project and (2) 2020 Census Telephony Solution project. The deliverables of the Concept Development phase consist of a Team Charter and a detailed Business Proposal.
2. Completed key IT-related activities in support of the 2014 Census Test:
 - Implemented the System Engineering and Integration Change Request process to track changes to the baseline requirements.
 - Completed development of the gate review/readiness process that aligns with the Enterprise System Development Lifecycle to monitor and ensure the readiness of systems for the 2014 Census Test.
 - Implemented five working groups to ensure all details and testing surrounding key interfaces for the 2014 Census Test are documented. These working groups address the interfaces of the following key systems: Universe Control and Response Management, Unified Tracking System, Research and Testing Operations Control System, Master Address File/Topologically Integrated Geographic Encoding and Referencing System, National Processing Center, and Center for Economic Studies.

Look Ahead

1. Begin collecting the initial set of business requirements for the 2020 Census.
2. Begin the Concept Development Phase for two projects: The 2020 Census Paper Data Capture Solution Project and the 2020 Census Telephony Solution Project.

Research Status

Reengineered Field Automation and Operational Infrastructure

Description

We will develop an instrument that utilizes mobile phones to collect data from non-responding households and to efficiently route and track enumerators during their work day. This includes the use of adaptive design to assign cases and set priorities and to provide that information to enumerators on a daily basis before they start their work day. We will develop alternatives for eliminating operations and maximizing the efficiency of the 2010 operations for 2020. We will reduce the number of field offices and revisit the 2010 supervisory structure in the field, based on the elimination of paper processing and the use of technology in the field.

Summary of Activities

1. Began the second systems test of nonresponse followup systems. These systems include: Census Operations Mobile Platform for Adaptive Services and Solutions (COMPASS), Research and Testing Operational Control System (RTOCS), Unified Tracking System (UTS), Universe Control and Records Management (UCRM), Decennial Applicant Payroll and Personnel Systems (DAPPS), and Master Control System (MCS) and Adaptive Design business models in support of Nonresponse Followup (NRFU) operational efficiency.
2. Completed usability testing of the RTOCS using a tablet.
3. Regarding the 2014 Census Test:
 - Completed the COMPASS implementation to limit personal visits to a single visit for pre-specified cases (as opposed to one day's worth of visits).
 - Began the second systems test for the nonresponse followup systems that include: COMPASS, RTOCS, UTS, UCRM, DAPPS, MCS in addition to testing of the Adaptive Design business models in support of nonresponse followup.

Research Status

Reengineered Field Automation and Operational Infrastructure (cont.)

Look Ahead

1. Complete the second systems test of nonresponse followup.
2. Finalize validation rules for data received by COMPASS from RTOCS.
3. Develop a process for sending a case note in RTOCS and COMPASS.
4. Conduct User Acceptance testing for the RTOCS and COMPASS systems.
5. Summarize findings and develop a cost analysis related to results of Local Census Office functional analysis sessions.
6. Regarding the 2014 Census Test:
 - Prepare technical specifications and get system ready to (1) append phone numbers and emails addresses from the contact frame and (2) conduct a phone service check on landline phone numbers from the contact frame.
 - Finish work with the e-mail/text provider system to ensure paradata (such as sent, delivered, undeliverable, etc.) are available for evaluation purposes.
 - Complete the second systems test for field enumeration.
 - Implement Enterprise Systems Development Lifecycle Gate Review process for system providers to ensure readiness for the test.

Research Status

Continual Address Frame Updating and Targeting

Description

We are examining the Master Address File (MAF)/Topologically Integrated Geographic Encoding and Referencing System maintenance processes, the impact our current processes have on maintenance, and improvements that can be made. Our research focuses on both workloads and field productivity and emphasizes reducing workloads through the use of statistical models that identify geographic areas in need of potential improvement, in partnership with the Geographic Support System. Evaluations include both quality and cost impacts.

Summary of Activities

1. Established a coordinated plan for Targeted Address Canvassing (TAC) alternatives that aligns the schedule for the *MAF Error Model* (MEM), the *GSS TAC Research, Model, and Area Classification* (TRMAC) model, and the 2020 cost estimation teams. Each Modeling team will produce 2009 and 2013 vintage models to feed TAC Recommendations planned from GSS in 2014; and they will produce 2014 vintage models and cost estimates to feed 2020 Census Recommendations planned for 2015.
2. Categorized tabulation blocks in sample based on housing unit characteristics for the TRMAC empirical approach (e.g., single family, multi-unit) as well as whether the number of residential units has remained stable, increased, or decreased since the 2010 Census.

Look Ahead

1. Document the cost analysis and estimation for the 2009 models, to estimate the expected costs savings from conducting TAC in 2020 using the 2009 model outputs.
2. Document findings from review of available administrative records files for model creation, including potential usefulness for models.
3. Complete the 2013 vintage statistical models from MEM and TRMAC. Complete an incremental cost savings table that quantifies cost and quality trade offs for various TAC option, and complete scenario development and systems testing for implementation of procedures unique to this test.
4. Complete empirical review of housing unit data for sample counties. Examine extent to which the empirical approach classification can be applied to all blocks within the U.S.

Additional Updates

Oversight & Stakeholder Engagement

Description

This covers work on major activities related to GAO and OIG audits (e.g., new audits; exit meetings for completed audits; issuance of draft/final reports; preparation of agency action plans), Congressional hearings related to the 2020 Census, and presentations and working meetings with our advisory committees, the 2020 Census NAS panel, and other external stakeholders.

Summary of Activities

1. OIG conducted an exit meeting on February 18 about how the 2020 program implemented budget reductions.
2. Delivered formal action plan to GAO and Congressional oversight committees in response to recommendations in GAO report (14-59) on decennial scheduling practices.
3. Briefed the Senate Oversight Committee Staff on 2020 Census updates on February 25.
4. Presented 2014 Census Test plans for Optimizing Self-Response, Administrative Records Modeling for NRFU, and NRFU Design and Operations to the Steering Committee of the Federal State Cooperative for Population Estimates, on February 12.
5. Presented administrative record usage research to the National Advisory Committee Administrative Records and Third Party Data Use in the 2020 Census Working Group.
6. Conducted two conference calls with the NAC Race and Ethnicity Research Working Group to discuss results of recent Census Bureau research and working group recommendations for future research.
7. Sent the second draft of the housing chapter on the 2020 round of censuses to the United Nations Expert Group on the *Principles and Recommendations*.
8. GAO issued final report GAO-14-59, 2020 Census: Bureau Needs to Improve Scheduling Practices to Enhance Ability to Meet Address List Development Deadlines, November, 2013. Action plan is due to GAO on February 10.
9. GAO held a meeting on January 27, to discuss the draft slide deck presenting their findings after reviewing the 2020 IT infrastructure. The briefing to the Hill was held on January 30.
10. OIG issued final report OIG-14-003-A, 2020 Census: Research Delays and Program Management Challenges Threaten Design Innovation, December 3, 2013. Action plan is due to OIG on February 3.
11. Provided the high level test schedule for the 2014 Census Test to GAO.
12. OIG issued the final report titled *2020 Census Planning: Research Delays and Program Management Challenges Threaten Design Innovation*. Census Bureau's action plan (in response to recommendations in the report) is due end of January 2014.

Oversight & Stakeholder Engagement (Cont.)

Look Ahead

1. GAO will conduct an entrance meeting to discuss the private sector's role in 2020 regarding address and mapping needs, on February 26.
2. State Data Center/Census Information Center Steering Committee will meet on March 4-6.
3. National Advisory Committee will meet on March 19-21. Conduct several conference calls with the NAC Race and Ethnicity Research Working Group to discuss strategies for sharing recent Census Bureau research findings and future research plans with race and ethnic communities, advocates, and other external stakeholders.
4. Census Scientific Committee will meet on April 10-11.
5. Conduct the next 2020 Census Program Management Review on March 28.

Program Schedule Metrics

Research & Testing

Numerous hours have been dedicated to maturing the 2020 Census lifecycle, research and testing project schedules to accurately reflect the program's current scope of work. We currently have 55 project schedules, consisting of more than 4,000 activities. Many project schedules were baselined and pushed into production in January 2014. Integration sessions were held in late January 2014, February 2014 and into March 2014. Weekly statusing has resumed effective March 10, 2014. Once all research and testing schedules are rebaselined and integrated, program schedule metrics will be available and provided in subsequent monthly reports. We fully expect to be able to provide metrics beginning in April 2014.

Other Activities

Summary of Activities

1. Held the first joint IT and Decennial Census Directorates Portfolio Management Governing Board on December 18 to approve charters for two projects: the 2020 Census Commercial Mobile Device Project and the 2014 Census Test Self Response Centurion Systems Project. This board will convene at least monthly hereafter with updates provided as needed at the Decennial Leadership Group meetings.
2. Led an international team, under the auspices of the United Nations (UN) Statistical Division, on proposing revisions to the chapter on housing topics in the UN's *Principles and Recommendations for Population and Housing Censuses*, for the 2020 round of censuses.

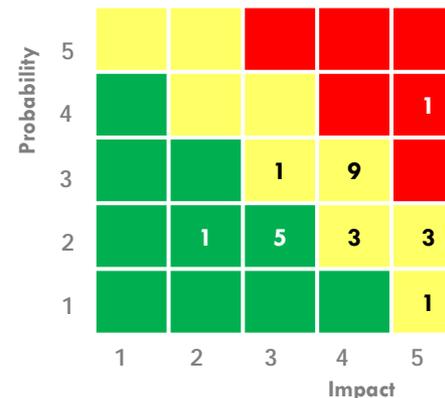
Look Ahead

1. Send proposed revisions to the UN Expert Group on the *Principles and Recommendations for Population and Housing Censuses*.

2020 Census Program-Level Life Cycle Risks (1 Red, 17 Yellow, 6 Green)

	WBS	Risk ID	Name	Level	Prior Month	Prob	Imp
1	1.105	LC-020	AdRec Usage Policy	H	-	4	5
2	1.110	LC-007	Skillset Shortage	M	-	3	4
3	1.106	LC-002	Cost Goal	M	-	3	4
4	2.101	LC-010	Enterprise IT Solutions	M	-	3	4
5	1.104	LC-011	Acquisition Lead Time	M	-	3	4
6	1.108	LC-012	External Support	M	-	3	4
7	1.105	LC-015	Program Life Cycle	M	-	3	4
8	1.105	LC-022	Late Technical Innovations	M	-	3	4
9	2.101	LC-024	Flexible Design	M	-	3	4
10	2.101	LC-025	System Readiness	M	-	3	4
11	1.107	LC-021	Schedule Impacts	M	-	3	3
12	1.108	LC-026	Public Acceptance of Internet	M	-	2	5
13	1.106	LC-003	Meeting Cost Assumption Goals	M	-	2	5
14	2.101	LC-028	Internet Data Collection	M	NEW	2	5
15	1.106	LC-001	Cost Model	M	-	2	4
16	1.105	LC-017	IRS Data Access	M	-	2	4

	WBS	Risk ID	Name	Level	Prior Month	Prob	Imp
17	2.101	LC-027	IT Security Controls	M	-	2	4
18	1.106	LC-004	ACS Funding	M	-	1	5
19	1.109	LC-008	PM/SE Resistance	L	-	2	3
20	2.101	LC-009	Requirements Engineering	L	-	2	3
21	1.105	LC-016	Policy Impacts	L	-	2	3
22	1.105	LC-023	Inconclusive Data	L	-	2	3
23	1.105	LC-019	T13 Data Access	L	-	2	3
24	1.104	LC-018	TAA Compliance	L	-	2	2



Explanation of New Risk
Internet Data Collection: Data collection for the 2020 Census will include internet data submission from respondents for the first time on a large scale. **IF** the business rules, requirements, and assumptions for the data collection instrument, including usability of the user interface, are not correctly defined, developed, and tested, **THEN** there could be a failure in our ability to successfully conduct cost-effective self-response enumeration in the 2020 Census.