

2020 Census Program Management Review

Preparations for the 2014 Census Test

Darlene Monaco and Justin McLaughlin

March 28, 2014

Agenda

1. Scope
2. Schedule– Key Activities
3. Systems Readiness
4. Operational Readiness
5. Program Issues
6. Risks
7. Questions and Answers
8. Attachments
 - Acronyms
 - Operational Readiness – Component Descriptions

Scope

- **High-Level Test Objectives:**

- Test contact alternatives for both the self-response and the non-response followup enumeration to determine the most efficient and cost effective way to get data from non-responding households.
- Test the use of Administrative Records to determine the quality of the records in conjunction with actual field enumeration while using predetermined contact strategies.
- Test the enumeration instrument prototype in the field to determine its impact on completing field enumeration and for use in the field and to determine what are the application and operational issues that need to be addressed in future testing.
- Test adaptive design approaches to set priority for cases, to either use telephone or personal visits in specified order, and to train enumerators.
- Use time and motion studies to determine enumerator challenges in using the enumeration device and to recommend changes to training.
- The 2014 Census Test will give us an opportunity to learn timing on how people come to the internet so that we can optimize systems for the future.

Scope - continued

- **Limitations:**

- The 2014 Census Site Test results will be based on housing units selected from a purposive, area sample selection and cannot be generalized to the entire nation. The results do not necessarily predict trends or rate estimates expected in the 2020 Census.
- For the nonresponse portion of the test, even with the electronic instrument, there is still limited control over the number and type of enumeration attempts. The contact data analysis is contingent upon the enumerator honestly reporting each and every contact attempt made. Also, the application does not enforce that the enumerator follow the attempt type (either personal visit or telephone call).
- We do not know what the peak response times will be for internet responders. Though we have looked at ACS data, the survey is much longer and so there is limited responder data.
- Solutions providers will be conducting pair and thread tests (interface testing). For this test we will not be doing end to end testing.

Scope - continued

- **Out of Scope :**
 - Only operations necessary to meet the test objectives are in scope. Therefore, operations such as: address listing; coverage followup; field reinterview and other post data collection quality control followup; other living quarters enumeration; coverage measurement and response processing are excluded.
 - In addition we are not developing applications for:
 - Automated payroll
 - Automated training
 - Routing of enumerators
 - No proactive Quality Control/Reinterview for field work. The contingency is to use Field Division's standard monitoring of outliers. If an enumerator's work is suspect, we will investigate. If falsification by the enumerator is found, we can remove the enumerator's work from the test results.

Schedule - Key Activities

Activity	Start	Finish
Finalize Field Test Site Selection	--	09/13/13A
Open LCO	4/17/14	
Conduct Pre-Registration Post Card Invitation	06/05/14	
Conduct Contact 1: <ul style="list-style-type: none"> • Mail Initial Letter and Instructions • Mail Post Card and Instructions • Send Email and Instructions 	06/23/14	06/23/14
Census Day	07/01/14	--
Conduct Contact 2: Send Post Card Reminder or Email Reminder	07/01/14	07/01/14
Conduct Contact 3: Send Post Card Reminder	07/08/14	07/08/14
Conduct Contact 4: Mail Questionnaires to Nonresponders	07/15/14	07/15/14
Cut for NRFU	07/21/14	--
Conduct Contact 5: Automated Voice Invitation Reminder	07/21/14	07/21/14
Conduct Enumerator Training	08/11/14	08/13/14
Conduct Nonresponse	08/14/14	09/25/14
Conduct Time and Motion	08/07/14	09/25/14

System Readiness Approach

- Monitor the current state of systems and their ability to provide the capabilities required for the 2014 Census Test.
- Provide information on where the solutions are in the system development lifecycle.

System Readiness Assumptions

- Systems used in support of the 2014 Census Test are largely existing systems being modified to support the objectives of the field test and may not represent the 2020 solutions.
- 2014 Census Test workload and required capabilities are greater than in the earlier field tests. This increased the overall complexity and requires additional collaboration, oversight, and program management requirements.
- Approach will evolve over time:
 - Adoption of Enterprise System Development Life Cycle (ESDLC 1.0) and new agency-wide requirements processes
 - New governance processes being implemented within and outside of the program
 - Systems reuse for the tests will give way to large scale enterprise and/or Decennial system development efforts are starting now to be tested later in the decade.

System Readiness – Last 90 Days

- Worked with the IT Directorate to develop and kick off a process to assess systems readiness and move IT-related efforts through the phases of the Systems Development Life Cycle (SDLC).
- Began working with solution providers to provide monthly metrics on the state of their system development efforts for the 2014 Census Test.
- Implemented a process to track system related changes for the test.
- Stood up working groups to ensure all details and system testing surrounding key interfaces for the 2014 Census Test are properly documented and on track.
- Completed System Tests 1 and 2 for systems supporting the non-response follow up operations for the 2014 Census Test, including:
 - Census Operations Mobile Platform for Adaptive Services and Solutions (COMPASS);
 - Research and Testing Operational Control System (RTOCS);
 - Unified Tracking System; Adaptive Design;
 - Universe Control Response and Management (UCRM); and Master Control System (MCS);
 - Geographic Systems (MAF, GRF-C, GRF-N); and
 - Decennial Applicant Personnel and Payroll System (DAPPS)

System Readiness – Last 90 Days

- Developed model to gauge anticipated workload for data collection system (Centurion). This model will be further matured and leveraged for future tests in the preparation for 2020.
- Developed requirements for systems that will push e-mails and text messages to invite and direct respondents on how to complete Internet data collection. We reviewed the technical and cost proposal information from sources within the Census Bureau. We completed technical analysis of the alternatives for an service provider.
- Selected an e-mail/text provider system.
- Completed design and began development to integrate a National Strategy for Trusted Identities in Cyberspace (NSTIC) pilot program into our own pre-registration application.

System Readiness – Next 90 Days

- Complete Interface Control Documents/Interface Security Agreements between systems supporting the 2014 Census Test.
- Continue gathering, reviewing, and monitoring interconnection test information from systems.
- Conduct load and user acceptance testing for 2014 Census Test self-response and non-response follow up systems.
- Continue and mature work with solutions providers on SDLC gate review process to ensure readiness for the test.
- Build the associated interfaces and specifications for two e-mail/text providers.
- Finish work with the e-mail/text provider system to ensure delivery of paradata (such as sent, delivered, undeliverable, etc.)

Systems Readiness - Status

System	Deploy Date	Status	Comments/Issues
DSSD – Identify Eligible Universe	02/10/14	Blue	Completed and delivered.
DSSD – Sample Non-responders for NRFU Universe	07/25/14	Green	On schedule for delivery.
DSSD – Admin Records Modeling	06/15/14	Green	On schedule for delivery.
CARRA – Append Phone Numbers and E-mail Addresses	04/15/14	Green	On schedule for delivery.
MAF/TIGER -- Delineation	10/18/13A	Blue	Completed and delivered.
MAF/TIGER -- Extract	02/18/14	Blue	Completed and delivered.
MAF/TIGER -- Non-ID Processing	06/06/14	Green	On schedule for delivery.

Red – May or will impact schedule. Explanation required.

Yellow – Can meet schedule but some activity requires monitoring. Explanation required.

Green – On schedule.

Blue – Completed.

Systems Readiness - Status

System	Deploy Date	Status	Comments/Issues
RTOCS	05/27/14	Green	On schedule for delivery.
COMPASS	06/20/14	Green	On schedule for delivery.
UCRM (Release 1)	04/07/14	Green	On schedule for delivery.
MCS and WebCATI	06/06/14	Green	On schedule for delivery.
iCADE	06/23/14	Green	On schedule for delivery.
NPC Services -- DocuTec	05/15/14	Green	On schedule for delivery.
NPC Services -- Addressing/Mailing	05/27/14	Green	On schedule for delivery.
NPC Services -- IPTS	06/06/14	Green	On schedule for delivery.
NPC Services -- ATAC	06/06/14	Green	On schedule for delivery.

Systems Readiness - Status

System	Deploy Date	Status	Comments/Issues
NPC Services -- Phone Tree – Verify land line phone numbers	03/13/14	Blue	Completed and delivered.
NPC Services -- Phone Tree – Conduct AVI for pre-notice	06/16/14	Green	On schedule for delivery.
NPC Services -- WebTQA	06/05/14	Green	On schedule for delivery.
UTS -- Paradata	06/06/14	Green	On schedule for delivery.
UTS -- Reports	06/06/14	Green	On schedule for delivery.
UTS -- Adaptive Design	06/06/14	Green	On schedule for delivery.
DAPPS	01/21/14	Blue	Completed and delivered for initial deployment.
CHEC and CBS	01/21/14	Blue	Completed and delivered for initial deployment.
Centurion -- Pre-Registration	06/05/14	Green	On schedule for delivery.
Centurion -- Internet Data Collection	06/23/14	Green	On schedule for delivery.
E-Mail Notification	06/23/14	Green	On schedule for delivery.

Operational Readiness - Status

Phase	Status	Activities – Last 90 days	Activities – Next 90 Days
Site Selection	Blue	09/03/13: Finalized Field Test Site Selection.	<ul style="list-style-type: none"> Completed
OMB Submission	Yellow	02/27/14: Review Clearance Package for 2014 Census Test sent to DOC	<ul style="list-style-type: none"> Complete all OMB submission activities
Logistics/ Training Kits	Green	01/29/14: Deliver Recruiting Materials to RO. 02/26/14: Deliver Admin Manuals to RO.	<ul style="list-style-type: none"> Deliver office training materials to LCO Deliver all Field Staff (FOS, crew leader, crew leader assistant and enumerator) training materials to LCO.
Recruiting	Green	01/24/14: Delineate FOSD/CLDs 01/30/14: Deployed DAPPS and CHEC in RO 02/28/14: Completed DAPPS training in RO. 03/06/14: Hired Recruiting Assistants (RA) 03/18/14: Trained RAs	<ul style="list-style-type: none"> Conduct recruiting activities for LCO management and office staff Conduct recruiting for field staff (FOS, crew leaders, crew leaders assistants and enumerators).
Blue = Complete, Green = On Time, Yellow = not on time but still meeting milestones, Red = milestones running late, White = not yet implemented for ORR			

Operational Readiness - Status - continued

Phase	Status	Activities – Last 90 days	Activities – Next 90 Days
LCO Space (Open LCO)	Green	<p>12/27/13: Executed Office Lease/Sign Occupancy Agreement</p> <p>12/27/13: Procured Non-IT equipment and furniture for LCO</p> <p>02/26/14: Finalize LCO Site Plan</p> <p>02/28/14: Procured equipment for LCO infrastructure</p>	<ul style="list-style-type: none"> • Conduct LCO IT build out • Conduct LCO equipment test • Make DAPPS available in LCO • Deploy RTOCS • Open LCO
Initial Universe	Green	<p>01/30/14: Delivered MAF Extract to DSSD</p> <p>01/30/14: Delivered GRF-C (codes) to AMSD, DAPPS and DSSD</p> <p>01/30/14: Delivered GRF- N (names) to DSSD</p> <p>01/30/14: Released Spatial Data to TMO/RTOCS, AMSD/DAPPS, FLD</p> <p>01/30/14: Released Geocoding Service to AMSD/DAPPS</p> <p>02/10/14: Delivered sample universe to CARRA</p>	<ul style="list-style-type: none"> • Deliver the GRF-C and GRF-N to UCRM • Deliver MAF Extract to UCRM • Deploy the contact frame process • Deploy the address enhancement process • Append phone numbers and emails to address file using administrative records • Deliver universe files with appended phone numbers to DSSD • Deploy URCM activities for Self-Response operations
<p>*Blue = Complete, Green = On Time, Yellow = not on time but still meeting milestones, Red = milestones running late, White = not yet implemented for ORR*</p>			

Operational Readiness - Status - continued

Phase	Status	Activities – Last 90 days	Activities – Next 90 Days
Self-Response	Green	<p>2/26/14: Conducted table reviews for Public Use forms.</p> <p>3/10/14: Completed validation of landline phone numbers via PhoneTree.</p>	<ul style="list-style-type: none"> • Print all self-response materials • Deploy self-response systems into production • Mail Pre-Registration Post Card • Conduct Contact 1: Internet Push, by mail and e-mail – Inviting respondents to participate in the 2014 Census Test.
Nonresponse Universe	Green		<ul style="list-style-type: none"> • Deliver MAF extract data to UCRM • Receive the NRFU Eligible Universe from UCRM • Sample Non-Responders and Deliver NRFU Workload file to UCRM
<p>*Blue = Complete, Green = On Time, Yellow = not on time but still meeting milestones, Red = milestones running late, White = not yet implemented for ORR*</p>			

Operational Readiness - Status - continued

Phase	Status	Activities – Last 90 days	Activities – Next 90 Days
NRFU Production	Green	3/20/14: Conducted Systems Test 2 Continued Development and Testing Activities	<ul style="list-style-type: none"> • Systems participating in User Acceptance test • Headquarters receives enumeration devices for field work • Deploy RTOCS, COMPASS to production • Deploy Training systems for RTOCS and COMPASS • Conduct RTOCS training to field office staff • Load GRF-C and DAPPS production data to RTOCS
Time and Motion	Green	Development and Testing Activities.	<ul style="list-style-type: none"> • Develop training and materials for observers and enumerators
Blue = Complete, Green = On Time, Yellow = not on time but still meeting milestones, Red = milestones running late, White = not yet implemented for ORR			

Operational Readiness - *Status* - continued

Phase	Status	Activities – Last 90 days	Activities – Next 90 Days
Closeout	White	Have not started yet.	
Evaluations	White	Have not started yet.	
Blue = Complete, Green = On Time, Yellow = not on time but still meeting milestones, Red = milestones running late, White = not yet implemented for ORR			

Program Concerns

Concerns	Response Plan
<p>There are not enough available resources to manage and conduct the 2014 Census Test and support the planning and development for the testing in 2015.</p>	<p>Manage resources to meet critical activities for each test. Identify additional resource needs.</p>

Risk Register Highlights

- The team meets regularly to review the current risks and identify new risks.
- Risk register is always available to team members to easily update ratings and plans in between regular risk reviews.
- Teams are required to provide contingency plans for red and yellow risks with a probability greater than 3.

Risk Register Highlights - *continued*

Risk Status	Risk Statement	Color	Mitigation Steps
Open	<p>Tax Year (TY) 2013 Internal Revenue Service (IRS) data need to be available for the 2014 Census Test.</p> <p>IF the first delivery of the TY 2013 IRS data is not available to the 8.107 Administrative Records Modeling team by July 17, 2014, THEN our administrative records modeling will not be able to use that data.</p> <p>The ramification of this is that a contingency approach will be implemented. This contingency approach to remove cases from the Nonresponse Followup (NRFU) workload and provide administrative record household information for adaptive design modeling purposes could either not identify as many housing units or have more error in the identification process.</p>	Red	<ol style="list-style-type: none"> 1) Develop specifications with a contingency plan in case IRS 1040 file is not available.
Open	<p>Office of Management and Budget (OMB) approval requires about 6 months.</p> <p>IF OMB approval time requirements remain as currently defined, THEN the printed Public Use Forms (PUFs) with print contracts may not be ready.</p>	Yellow	<ol style="list-style-type: none"> 1) Coordinate quick responses to OMB and DOC questions.

Risk Register Highlights - *continued*

Risk Status	Risk Statement	Color	Mitigation Steps
Open	IF the policy question about whether the Administrative Records Modeling team can provide information about children 4 or younger are present in a household based on administrative record sources is not resolved THEN the team will not be able to provide this information for the modeling.	Yellow	1) Having Data Stewardship Executive Policy (DSEP) Committee resolve if this usage can be done.
Open	The Research and Testing Operational Control System (RTOCS) office training will be limited to written job aids only, will not include classroom verbatim training. IF Job Aid Materials are not effective THEN RTOCS users may not have a clear understanding of RTOCS functionality which may result in poor management and assignment of work.	Yellow	1) Job aids will be reviewed by headquarters field staff. 2) Job aids will be included in a dry run of field training materials and job aids updated accordingly .

Risk Register Highlights - *continued*

Risk Status	Risk Statement	Color	Mitigation Steps
Open	<p>Performance of the self response internet application may be negatively impacted if sufficient IT infrastructure is not provisioned to support 2014 Census Test during self response.</p> <p><u>IF</u> the number of concurrent users exceeds the IT infrastructure provisioned, <u>THEN</u> respondents and/or the public will be unable to respond which could have a negative impact on the Census Bureau's public perception and our ability to collect sufficient quantities of data required to feed the 2015 design decision.</p>	Yellow	<p>Conduct tests per established testing procedures prior to deployment of internet instruments. Use redundant servers with High Availability architecture, test failover and run significant load testing on servers. Develop a workload model based on business requirements and historical response profiles. Use model to size IT infrastructure.</p>

Risk Register Highlights - *continued*

Risk Status	Risk Statement	Color	Mitigation Steps
Open	<p>The testing of the COMPASS application was impacted by several of our experienced/knowledgeable testers being detailed which resulted in fewer testers and a loss of application knowledge.</p> <p>IF additional experienced testers are not provided to test the COMPASS application, THEN issues may make it through to User Acceptance Testing and resources will need to be redistributed to correct the issues instead of fixing minor bug fixes which are expected in User Acceptance Testing. Depending on the severity and number of issues, the deployment of COMPASS to production may have to be delayed.</p>	Yellow	<ol style="list-style-type: none"> 1) The development of COMPASS uses the agile process, which requires that new functionality be tested and approved by stakeholders. Ongoing on a biweekly basis. 2) COMPASS was tested by stakeholders in System Test 1. 12/20/14 3) COMPASS was tested by stakeholders in System Test 2. 3/15/14
Open	<p>To conduct the 2014 Census Test, field staff must be trained on the procedures.</p> <p>IF training manuals/supplies/materials are not prepared according to schedule (before testing begins) THEN staff may not be properly trained for the test.</p>	Green	<ol style="list-style-type: none"> 1) Field training Staff identifies and informs adaptive design and tailoring contact strategies staff what information Field Division (FLD) need to know to reproduce training. 2) FLD, adaptive design, and tailoring contact strategies staff establish a schedule and meet regularly to discuss the status of the schedule and deliverables.

Risk Register Highlights - *continued*

Risk Status	Risk Statement	Color	Mitigation Steps
Open	<p>Due to the complexity of the enumeration questionnaire, there are approximately 500 user stories related to developing and testing the enumeration questionnaire on a mobile device.</p> <p>IF the allotted time to develop and test instrument functionality is insufficient, THEN some questions, screens, or functionalities may not be developed and tested.</p>	Green	<ol style="list-style-type: none"> 1) Team developed a development schedule that includes 2 week sprints. Each sprint is vetted with stakeholders at least 2 weeks prior to the start of the sprint.6/1/12 2) A development roadmap was developed on 11/21/12. 3) The OCS Team developed and released a roadmap on 3/26/13. 4) The roadmap was updated in August and September 2013 to plan the closeout of Test Ready Package C, plan the development of Test Ready Package D and begin the roadmap for Test Ready Package E. 5) The team has prioritized the remaining user stories for the 2014 Census Test and is on pace to complete these user stories, as of 3/7/14.

Risk Register Highlights - *continued*

Risk Status	Risk Statement	Color	Mitigation Steps
Open	<p>Headquarters staff had issues gaining access to the Research and Testing Operational Control System (RTOCS) via VDI during Systems Test1 .</p> <p>IF users are unable to access the RTOCS via VDI during the 2014 Census Test, THEN work will not be issued to field staff in a timely manner and would affect the outcome of test objectives.</p>	Green	<ol style="list-style-type: none"> 1) Conduct System Test 2 with new RTOCS VDI users. (2/24/14 to 3/24/14) 2) Conduct User Acceptance Testing with new RTOCS VDI users. (4/14/14 to 4/25/14)
Open	<p>User Acceptance Test (UAT) for the Research and Testing Operational Control System (RTOCS) is scheduled for April 14, 2014 and is designed for the field users to review and accept RTOCS prior to going to production.</p> <p>IF Field Division does not have the resources to properly test RTOCS THEN users of RTOCS may experience issues while in production.</p>	Green	<ol style="list-style-type: none"> 1) System test 1 completed on 12/20/13. 2) System test 2 completed on 3/15/14. 3) TMO testing of corrected System test 2 issues. TBD

Q & A

System Acronyms and Names

- ATAC Automated Tracking and Control
- CARRA Center for Administrative Records Research and Applications
- CBS Commerce Business Systems
- CHEC Census Hiring and Employment Check System and Fingerprinting
- COMPASS Census Operations Mobile Platform for Adaptive Services and Solutions
- DAPPS Decennial Applicant, Personnel and Payroll Systems
- DocuTec Document production system
- DSSD Decennial Statistical Studies Division
- IPTS Intelligent Mail Barcode (IMB) Confirm Service® Postal Tracking System
- iCADE Integrated Computer Assisted Data Entry
- JARS Jeffersonville Activity Reporting System
- MAF/TIGER Master Address File
- MCS Master Control System
- NPC National Processing Center
- QUI/GIBS Questionnaire User Interface (QUI) Generalized Instrument Design System
- Research1 Administrative records Modeling Services
- RTOCS Research and Testing Operations Control System
- UCRM Universe Control and Response management
- UTS Unified Tracking System
- WebCATI Web Computer Aided Telephone Interviewing
- WebTQA Web Téléphone Questionnaire Assistance
- Phone TreeLandline Phone Service Check, AVI (robocall)

Operational Readiness – Component Descriptions

The 12 Components of Operational Readiness

#	Component	Description of Component
1	Site Selection	The Site Selection Area is responsible for collecting site selection criteria, identifying site location and creating maps and summary information about the site area.
2	OMB Submission	The OMB Clearance Area is responsible for gaining OMB clearance for the 2014 Census Test. In order to accomplish this the team will need to provide sample sizes, methodology, cost and copies of documents distributed to the public.
3	Logistics/Training Materials	The Logistics/Kits Area is responsible for developing kit materials and having the necessary materials printed or delivered for kitting. The area is also responsible for making the kits and having the kits delivered to the LCO.
4	Recruiting	The Recruiting Area is responsible for developing recruiting materials and deploying DAPPS, CHECK and CBS in time for background checks and official hiring.

Operational Readiness – Component Descriptions

The 12 Components of Operational Readiness - *continued*

#	Component	Description of Component
5	LCO Space	The Local Census Office (LCO) Space Area is responsible for creating an working environment that will allow census workers to fulfill their duties for the 2014 Census Test. This involves leasing and building out office space that adheres to GSA guidelines while furnishing the office with supplies (non-IT and IT equipment) that are necessary for the 2014 Census Test.
6	Initial Universe	The Initial Universe Creation Area is responsible for creating the initial universe for self-response (telephone, internet and mailout/mailback).
7	Self-Response	The Self-Response Area is responsible for developing systems that will collect responses from respondents through the use of the internet, phone and mail. The Self-Response Area will allow respondents to enter their responses on the internet directly or through a call center which will enter the respondents answers into the internet system. The Self-Response Area will be responsible for mailing materials to respondents and collecting questionnaires mailed back for data capture.

Operational Readiness – Component Descriptions

The 12 Components of Operational Readiness - *continued*

#	Component	Description of Component
8	Nonresponse Universe	Processing needs to occur once data is received from the three self-response areas (telephone, MO/MB and internet) so that the initial NRFU production universe can be created. Once the initial NRFU production universe is created, updates of self response cases received will be sent to the NRFU production instruments.
9	NRFU Production	The NRFU Production Area is responsible for preparing the iPhone/iPad for field work, deploying necessary systems (Master Control, WebCATI, COMPASS, RTOCS), creating and distributing field materials, and training field and office workers.
10	Time and Motion	The Time and Motion Area is responsible for developing a Time and Motion device to measure the usability of systems used in the field to collect respondent data. The Time and Motion area is also responsible for procuring devices used for the study along with developing procedures and training.
11	Closeout	The Closeout LCO Area is responsible for closing out the LCO.
12	Evaluations	The 2020 Research and Testing Teams are responsible for processing collection data, collecting lessons learned and providing team level reports for future tests.