

United States Census 2020

2018 End-to-End Census Test: Forms Printing and Distribution Operational Assessment Study Plan

Forms Printing and Distribution
Program Integrated Project Team

Draft Pending Final Census Bureau Executive Review and Clearance.

I. Introduction

The 2018 End-to-End Census Test is an important opportunity for the Census Bureau to ensure an accurate count of the nation's increasingly diverse and rapidly growing population. It is the first opportunity to apply much of what has been learned from census tests conducted throughout the decade in preparation for the nation's once-a-decade population census. The 2018 End-to-End Census Test peak operations will be focused on Providence County, Rhode Island. The county has a population of over 600,000 with more than a quarter-million housing units.

The 2018 End-to-End Census Test will test and validate the 2020 Census operations, procedures, systems, and field infrastructure to ensure proper integration and conformance with functional and non-functional requirements. The test also will produce a prototype of geographic and data products, and will validate the 2020 Census design and cost estimate. Note that the 2018 End-to-End Census Test results are based on three sites that were purposely selected and cannot be generalized to the entire United States. Additionally since it is not conducted in a "full decennial census environment," the results may not replicate the results to be obtained in the 2020 Census.

This study plan documents how the Forms Printing and Distribution (FPD) operation will be assessed, as guided by the questions to be answered.

The FPD operation prints and distributes printed materials to support the 2018 E2E Census Test and the 2020 Census mailing strategy and enumeration of the population. These include: Internet invitation letters; Reminder cards or letters; Questionnaire mailing packages; response materials for Group Quarters enumeration and other operations. For the 2018 E2E CT and the 2020 Census the contact strategy will include a questionnaire mailing to all households in the mail universe that do not respond to the initial mailing.

The FPD will print and distribute internet invitations, reminder cards or letters, and questionnaire mail packages in multiple languages.

- The contact strategy will include printing and mailing of paper invitations and reminder cards or letters.
- Paper questionnaires will be printed and mailed initially to some portion of the population and to all non-responding households in the mail universe.
- Printing and mailing will be contracted through the Government Publishing Office.
- A serialized barcode will be printed on each sheet of a questionnaire to ensure all pages for a household are properly captured.

- The questionnaires for non-responding households will be addressed in near real time to minimize distribution to households who have engaged in the digital or other non-paper response channels.

This assessment includes key activities starting with the collection of printing requirements and ending with the distribution of census materials via the United States Postal Service (USPS).

The assessment will evaluate the following areas of the Forms Printing and Distribution (FPD) Program:

FPD Planning and Preparation	<ul style="list-style-type: none"> • Requirements/Workloads • Form Design • Print Contracts • Schedules • Partnership with Key Stakeholders
Oversight, Monitoring and Reporting	<ul style="list-style-type: none"> • Address Data File Processing • Security • Postal Costs
Production (Printing/Addressing/Assembly) & Mailing)	<ul style="list-style-type: none"> • Printing Production • Addressing • Assembly • Quality Assurance • Distribution of Mail

II. Background

Census Tests conducted from 2012 through 2015 answered specific research questions allowing the Census Bureau to make decisions on important aspects of the operational design for the four key innovation areas: 1) Optimizing Self-Response (OSR), 2) Reengineering Field Operations, 3) Utilizing Administrative Records, and 4) Reengineering Address Canvassing.

2016 Census Test

Starting in 2016, the focus shifted to validating and refining the design by testing the interactions across selected operations and determining the proposed methodology for those operations at the same time, testing of production systems began.

The 2016 Census Test OSR activities included refining contact strategies, providing language support, and improving questionnaire content. Since we will make an effort to increase

response via the Internet, we must test to determine the Internet usage and processing responses without Census-issued ID numbers (Non-ID processing).

The 2016 Census Test focused on improving the efficiency of Nonresponse Followup (NRFU) by including the use of administrative records and technological and operational improvements.

The 2016 Test included mailing questionnaires to all non-responding households a single mailing (4th contact). This was a significant change to the approach to non-responding households which in prior Census mailings to non-responding households was limited to about 20% of those who did not respond.

Starting with the 2016 Test, the FPD operation accelerated the print acquisition schedule to better align with the necessary security approval processes.

2017 Census Test

The 2017 Census Test examined how people responded to a question to obtain data on tribal enrollment, using panels on the Internet and paper questionnaires (with the telephone data collection operation using the Internet panels).

Additionally, this test supported continued refinement of methods to process self-responses submitted without a unique Census Bureau-provided identification code (for the operation called Non-ID processing). The option to respond using the Internet instrument without an ID represented a giant leap in convenience to the respondent in support of a “respond anywhere, anytime,” approach for 2020. In prior censuses, a respondent would have needed to obtain a blank “Be Counted,” form from a Questionnaire Assistance Center to self-respond without having a Census ID.

The FPD operation further refined the acquisition timing to include an initial security review as a component of an award determination. Six weeks were added to the schedule to allow for the review of the vendor submitted security package after the bid opening date but prior to the official award date of the contract.

2018 E2E Census

With the 2018 End-to-End Census Test the focus broadens to confirming the overall integrity of the operational design. Additionally, the 2018 E2E CT will introduce enterprise systems that were not used in earlier census tests, expand systems already in use, and enhance systems using cloud technologies.

The 2018 End-to-End Census Test objectives are to:

- Validate that the operations in-scope for the Test are ready to go into production for the 2020 Census.

- Test and validate major operational threads, procedures, systems and infrastructure together to ensure proper integration and conformance with requirements.
- Produce prototypes of geographic and data products.

The 2018 End-to-End Census Test will include aspects of all four key innovation areas. The innovation area directly related to the FPD operations is Optimizing Self-Response strategy area.

Optimizing Self-Response: the goal of generating the largest possible self-response, reducing the need to conduct expensive in-person follow-up with those households. This innovation area strives to make it easy for people to respond from any location at any time by:

- Enabling people to respond by multiple modes: internet, paper, or telephone.
- Allowing respondents to submit a questionnaire without a unique Census-assigned user identification code (ID).
- Providing online questionnaires in multiple languages.

For this innovation area to be successful, respondents must know that their personal information is protected. Thus, a key element of this innovation area is to assure respondents that their data are secure and treated as confidential.

The FPD operation is leveraging the 2018 End to End Test printing requirements as a basis for a multiyear award for the printing and mailing services for the 2020 Census. The 2018 detailed requirements will be defined in one of three print orders: 1) 2018 E2E CT 2) 2019 Operational Test and 3) 2020 Census all held within the scope of the 2018 E2E CT/2020 Census comprehensive contract. The technical challenge being tested by FPD during the 2018 E2E CT is how to link the addresses printed onto the premade mail packages to the questionnaire's serialized data capture routing barcode in an efficient way. The selected vendor shall determine an appropriate method that will allow scaling of the operation to meet an expected workload of about 90 million packages to be mailed within 14 days of receiving address files.

III. Assumptions

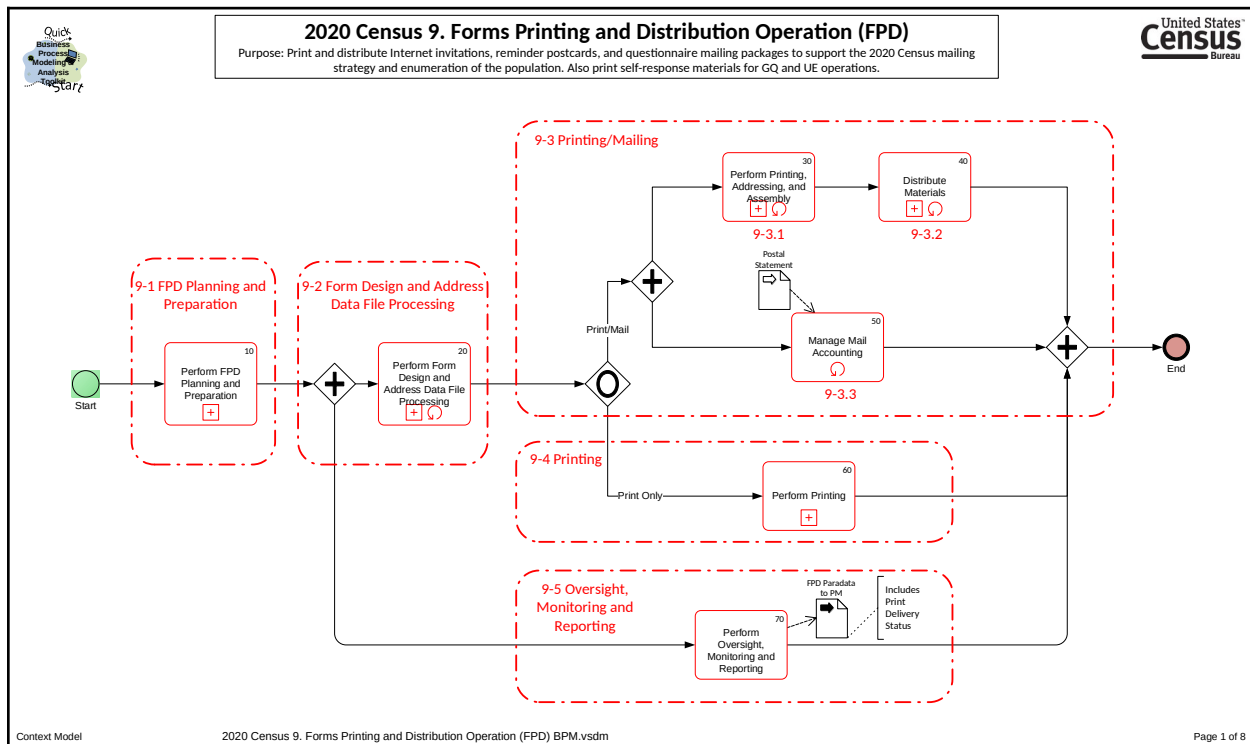
FPD will support a mail strategy that will contact most households (the mail universe) up to five times. The third through fifth contacts will be conditional, removing responding households and addresses that were undeliverable in previous attempts from subsequent mailings. The contact materials will include: invitations to respond online; reminder letters and postcards; paper questionnaires; and "It's not too late" reminders. Additional contacts may support the Nonresponse Followup and Update Enumerate operations.

The fourth contact (conducted over about seven days) will require the addressing and mailing of questionnaire packages to all households that have not yet responded.

FPD will support other operations such as Group Quarters by printing questionnaires and related materials in bulk and delivering them to the operations.

IV. Scope of Assessment Content and Questions-To-Be-Answered

Business Process Model (BPM) showing the Level 1 activity areas within the FPD Operation. BPMs for the 2020 Census follow industry-standard Business Process Model and Notation (BPMN). An explanation of how to read the BPMN notations and a full sized copy of all of the BPMN diagrams for this operation are provided under separate cover.



The FPD Operation is subdivided into the following Activity Areas.

- FPD Planning and Preparation [FPD 9-1].
- Form Design and Address Data File Processing [FPD 9-2].
- Printing/Mailing [FPD 9-3].
- Printing [FPD 9-4].
- Oversight, Monitoring and Reporting [FPD 9-5].

This FPD operational assessment will answer the following questions:

- What was the process used to gather print requirements? Did the process work?

What needs improvement?

- o Methodology: To ensure print requirements collected were reliable FPD will compare contract schedule milestones and accuracy of requirements with stakeholder operation outcomes.*
- Was the FPD acquisition strategy appropriate for the size and complexity of the 2018 E2E CT?
 - o Methodology: FPD will compare the broad strategy of a multi-year contract approach to the option of separate contracts for the 2018 E2E CT and 2020 Census.*
- Did the vendors fulfill all requirements of the contracts? Where there any issues?
 - o FPD will conduct a lesson learned review with print vendor and GPO at the conclusion of the printing operations.*
- Did the FPD schedule accurately reflect the sequence of activities for the successful management of the program?
 - o Methodology: FPD will use a schedule variance report to compare actual dates with planned dates.*
- What was the tool used to track the print vendor's progress? What aspects worked? What needs improvement?
 - o Methodology: FPD will compare vendor printing production reports with the postal and shipping receipts of materials shipped from production site.*
- Was the quality control (QC) process for the 2018 E2E CT print production effective in ensuring the quality of the final products? Was the QC staff adequate? Was training adequate to support the needs of the program?
 - o Methodology: FPD will compare QC production reports and QC procedures for compliance with the quality standards for: addressing postal mail, variable barcode printing and assembly.. FPD will conduct a lesson learned review with the print vendor and GPO at the conclusion of the printing operations*
- Was the printing of the 2018 E2E CT Public Use Forms (PUF) successful? Were print quantities sufficient for the operation? What were the distribution paths for the Public Use Forms after they were printed?
 - o Methodology: FPD will compare the printing materials to the program requirements. FPD will evaluate the PUF distribution paths: staged verses conditional mailings via the USPS and bulk delivery of materials.*
- Were there any unanticipated issues during the mailing of the 2018 E2E CT Public Use Forms?
 - o Methodology: FPD will conduct a lesson learned review with the print vendor and GPO at the conclusion of the printing operations.*
- Were the address files delivered to the print vendor according to the schedule? Was the process used to transfer address files to the vendor effective?
 - o Methodology: FPD will use a schedule variance report to compare actual dates with planned dates. The steps for address file verification protocol will be evaluated for compliance for each file delivery.*
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- Describe the communication and integration efforts between the Census Bureau and the USPS. What aspects worked well? What needs improvement?

- *Methodology: FPD will conduct a lesson learned review with the print vendor and USPS at the conclusion of the mail out operations*
- Describe the communication and integration efforts between the Census Bureau and the GPO. What aspects worked well? What needs improvement?
 - *Methodology: FPD will conduct a lesson learned review with the print vendor and GPO at the conclusion of the printing operations.*
- How much did the printing of the 2018 E2E CT materials cost? How did the projected printing cost compare to the actual printing cost?
 - *Methodology: FPD will compare the initial cost estimates provide by GPO to the itemize bid pricing of the lowest bidder to project the cost of printing, then compare the projected cost to the actual cost.*
- How much did postage cost for the 2018 E2E CT mail-out operations? What was the estimated postage costs the actual postage costs?
 - *Methodology: FPD will compare the projected mailing cost based on the USPS pricing guide to the actual cost of postage as accounted by the Mail Management Branch of Census Administrative Customer Services Division (ACSD).*
- Did the security measures employed by the Census Bureau, the vendors, and the USPS ensure the integrity and confidentiality of the mail pieces throughout the production and distribution phases of the 2018 E2E CT?
 - *Methodology: FPD will account for all incidents as recorded by the Office of Information Security (OIS). FPD will conduct a lesson learned review with print vendor and GPO at the conclusion of the printing operations*
- How did the development of new (targeted) mail contact strategies affect/impact/change FPD operations?
 - *Methodology: FPD will evaluate the addressing of conditional mailing packages and the ability for the mail packages to reach households by the scheduled in-home delivery date.*
- What impact did adopting a mailing strategy to require all non-responding households to be sent a questionnaire packet have on FPD operations?
 - *Methodology: FPD will evaluate the ability to for the operation to meet the additional burden of addressing and mailing questionnaire packets in a compress window of 14 days from the delivery of the address file.*
- What issues were presented in the FPD operation as a result of the selected mail strategy, non-ID processing or some other catalysis?
 - *Methodology: Does not apply to 2018 E2E CT*
- What strategies are the FPD operation employing in 2018 E2E CT to meet the challenges of printing and distributing PUF as needed? Are they scalable (?) for 2020?
 - *Methodology: FPD will evaluate the staged mailing verses conditional mailing packages and the ability for the mail packages to reach households by the scheduled in-home delivery date.*

V. Methodology

The following data sources will be used to answer the research questions: (see methodology listed below each assessment question above).

The evaluation will use internal planning documents, stakeholder reports, change requests, observation reports, production reports, lessons learned, postal tracking information, and QC data as sources to answer the research questions.

VI. Risks/Limitations

- Inadequate staffing of the FPD branch and of the production QC operations pose a risk to the program.
- A production facility event (i.e. natural disaster or other) that would prevent or impede the printing of Census materials.
- An acquisition strategy combining the 2018 E2E and 2020 Census printing and mailing contracts increased complexity and introduced a schedule risk for 2018.

VII. Measures of Success

Types of success measures include:

- Meeting all mail material in home delivery dates.
- Ensure production quality of printed materials meets standards as defined in the contract.
- Maintain security protocols in the transfer to and handling of address files at the vendor site.

VIII. Data Requirements

To perform the assessment of our research questions, the FPD will need the following data:

- Vendor printing and assembly production reports
- Lesson Learned findings and report
- Vendor production schedules for printing and assembly

IX. Division Responsibilities

- Content and Forms Design Branch, (CFD) is responsible for defining the form specifications and workloads for the materials printed in support of the 2020 Census.

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- Administration Customer Service Division (ACSD) is responsible for the designing the printed materials, producing digital files of the materials and managing the postal costs.
- Internet Self Response Branch (ISR) is responsible for defining the mail strategy the management of the internet response tools.
- Paper Data Capture (PDC) is responsible for collecting and processing the data from returned census surveys.
- Geography Division, (GEO) is responsible for the establishment of interagency protocols with the United States Postal Service (USPS) for decennial mailings.

X. Milestone Schedule

Activity ID	Activity Name	Orig Duration	Start	Finish
Forms Printing and Distribution Assessment Study Plan				
First Draft				
	Prepare First Draft of Forms Printing and Distribution Assessment Assessment Study Plan	15	7/11/17	7/31/17
	Distribute First Draft of Forms Printing and Distribution Assessment Study Plan to the Assessment Sponsoring DCMD ADC and Other Reviewers	1	8/1/17	8/1/17
	Incorporate DCMD ADC and Other Comments to Forms Printing and Distribution Assessment Study Plan	5	8/2/17	8/9/17
Initial Draft				
	Prepare Initial Draft Forms Printing and Distribution Assessment Study Plan	5	8/10/17	8/17/17
	Distribute Initial Draft Forms Printing and Distribution Assessment Study Plan to Evaluations & Experiments Coordination Brach (EXC)	1	8/18/17	8/18/17
	EXC Distributes Initial Draft Forms Printing and Distribution Assessment Study Plan to the DROM Working Group for Electronic Review	1	8/21/17	8/21/17

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Activity ID	Activity Name	Orig Duration	Start	Finish
	Receive Comments from the DROM Working Group on the Initial Draft Forms Printing and Distribution Assessment Study Plan	5	8/22/17	8/29/17
	Schedule the Forms Printing and Distribution Study Plan for the IPT Lead to Meet with the DROM Working Group	17	8/30/17	9/26/17
	Discuss DROM Comments on Initial Forms Printing and Distribution Assessment Study Plan	1	9/27/17	9/27/17
Final Draft				
	Prepare Final Draft of Forms Printing and Distribution Assessment Study Plan	15	9/28/17	10/20/17
	Distribute Final Draft of Forms Printing and Distribution Assessment Study Plan to the DPMO and the EXC	1	10/23/17	10/23/17
	Schedule and Discuss Final Draft Forms Printing and Distribution Assessment Study Plan with the 2020 PMGB	14	10/24/17	11/13/17
	Incorporate 2020 PMGB Comments for Forms Printing and Distribution Assessment Study Plan	5	11/14/17	11/20/17
	Prepare FINAL Forms Printing and Distribution Assessment Study Plan	5	11/21/17	11/28/17
	Distribute FINAL Forms Printing and Distribution Assessment Study Plan to the EXC	1	11/29/17	11/30/17
	EXC Staff Distributes the Forms Printing and Distribution Assessment Study Plan and 2020 Memorandum to the DCCO	3	12/1/17	12/5/17
	DCCO Staff Process the Draft 2020 Memorandum and the Forms Printing and Distribution Assessment Study Plan to Obtain Clearances (DCMD Chief, Assistant Director, and Associate Director)	30	12/6/17	1/19/18
	DCCO Staff Formally Release the Forms Printing and Distribution Assessment Study Plan in the 2020 Memorandum Series	1	1/22/18	1/22/18
Forms Printing and Distribution Assessment Report				
First Draft of Assessment Report				

Forms Printing and Distribution Study Plan Version 1.0

Activity ID	Activity Name	Orig Duration	Start	Finish
	Receive, Verify, and Validate Forms Printing and Distribution Assessment Data	20	1/23/18	2/20/18
	Examine Results and Conduct Analysis	20	2/21/18	3/21/18
	Prepare First Draft of Forms Printing and Distribution Assessment Report	15	3/22/18	4/11/18
	Distribute First Draft of Forms Printing and Distribution Assessment Report to the Assessment Sponsoring DCMD ADC and Other Reviewers	1	4/12/18	4/12/18
	Incorporate DCMD ADC and Other Comments Forms Printing and Distribution Assessment Report	7	4/13/18	4/23/18
Initial Draft of Assessment Report				
	Prepare Initial Draft Forms Printing and Distribution Assessment Report	8	4/24/18	5/3/18
	Distribute Initial Draft Forms Printing and Distribution Assessment Report to Evaluations & Experiments Coordination Br. (EXC)	1	5/4/18	5/4/18
	EXC Distributes Initial Draft Forms Printing and Distribution Assessment Report to the DROM Working Group for Electronic Review	1	5/7/18	5/7/18
	Receive Comments from the DROM Working Group on the Initial Draft Forms Printing and Distribution Assessment Report	10	5/8/18	5/21/18
	Schedule the Forms Printing and Distribution Report for the IPT Lead to Meet with the DROM Working Group	10	5/22/18	6/5/18
	Discuss DROM Comments on Initial Draft Forms Printing and Distribution Assessment Report	1	6/6/18	6/6/18
Final Draft of Assessment Report				
	Prepare Final Draft of Forms Printing and Distribution Assessment Report	25	6/7/18	7/12/18
	Distribute Final Draft of Forms Printing and Distribution Assessment Report to the DPMO and the EXC	1	7/13/18	7/13/18
	Schedule and Discuss Final Draft Forms Printing and Distribution Assessment Report with the 2020 PMGB	14	7/16/18	8/2/18
	Incorporate 2020 PMGB Comments for Forms Printing and Distribution Assessment Report	10	8/3/18	8/16/18
Final Assessment Report				
	Prepare FINAL Forms Printing and Distribution Assessment Report	10	8/17/18	8/30/18

Forms Printing and Distribution Study Plan Version 1.0

Activity ID	Activity Name	Orig Duration	Start	Finish
	Deliver FINAL Forms Printing and Distribution Assessment Report to the EXC	1	8/31/17	8/31/18
	EXC Staff Distribute the FINAL Forms Printing and Distribution Report and 2020 Memorandum to the DCCO	3	9/4/18	9/6/18
	DCCO Staff Process the Draft 2020 Memorandum and the FINAL Forms Printing and Distribution Report to Obtain Clearances (DCMD Chief, Assistant Director, and Associate Director)	30	9/7/18	10/19/18
	DCCO Staff Formally Release the FINAL Forms Printing and Distribution Report in the 2020 Memorandum Series	1	10/22/18	10/22/18
	EXC Staff Capture Recommendations of the FINAL Forms Printing and Distribution Report in the Census Knowledge Management SharePoint Application	1	10/23/18	10/23/18

XI. Issues That Need to be Resolved

XII. Review/Approval Table

Role	Electronic Signature	Date
Fact Checker or independent verifier		
Author's Division Chief (or designee)		
DCMD ADC		
DROM DCMD co-executive sponsor (or designee)		
DROM DSSD co-executive sponsor (or designee)		
Associate Director for R&M (or designee)		
Associate Director for Decennial Census Programs (or designee)		
2020 PMGB		

XIII. Document Revision and Version Control History

VERSION/EDITOR	DATE	REVISION DESCRIPTION	EAE IPT CHAIR APPROVAL
v. 1.0/Erin Love	12/8/2016	Final draft	<i>Randall Neugebauer</i>

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XIV. Glossary of Acronyms

Acronym	Definition
ADC	Assistant Division Chief
DCCO	Decennial Census Communications Office
DPMO	Decennial Program Management Office
DROM	Decennial Research Objectives and Methods Working Group
DSSD	Decennial Statistical Studies Division
EXC	Evaluations & Experiments Coordination Branch
IPT	Integrated Project Team
PMGB	Portfolio Management Governance Board
R&M	Research & Methodology Directorate

XV. References

<<Use The Gregg Reference Manual: A Manual of Style, Grammar, Usage, and Formatting, by William A. Sabin, as a style guide.>>