

2020 Census Program Management Review

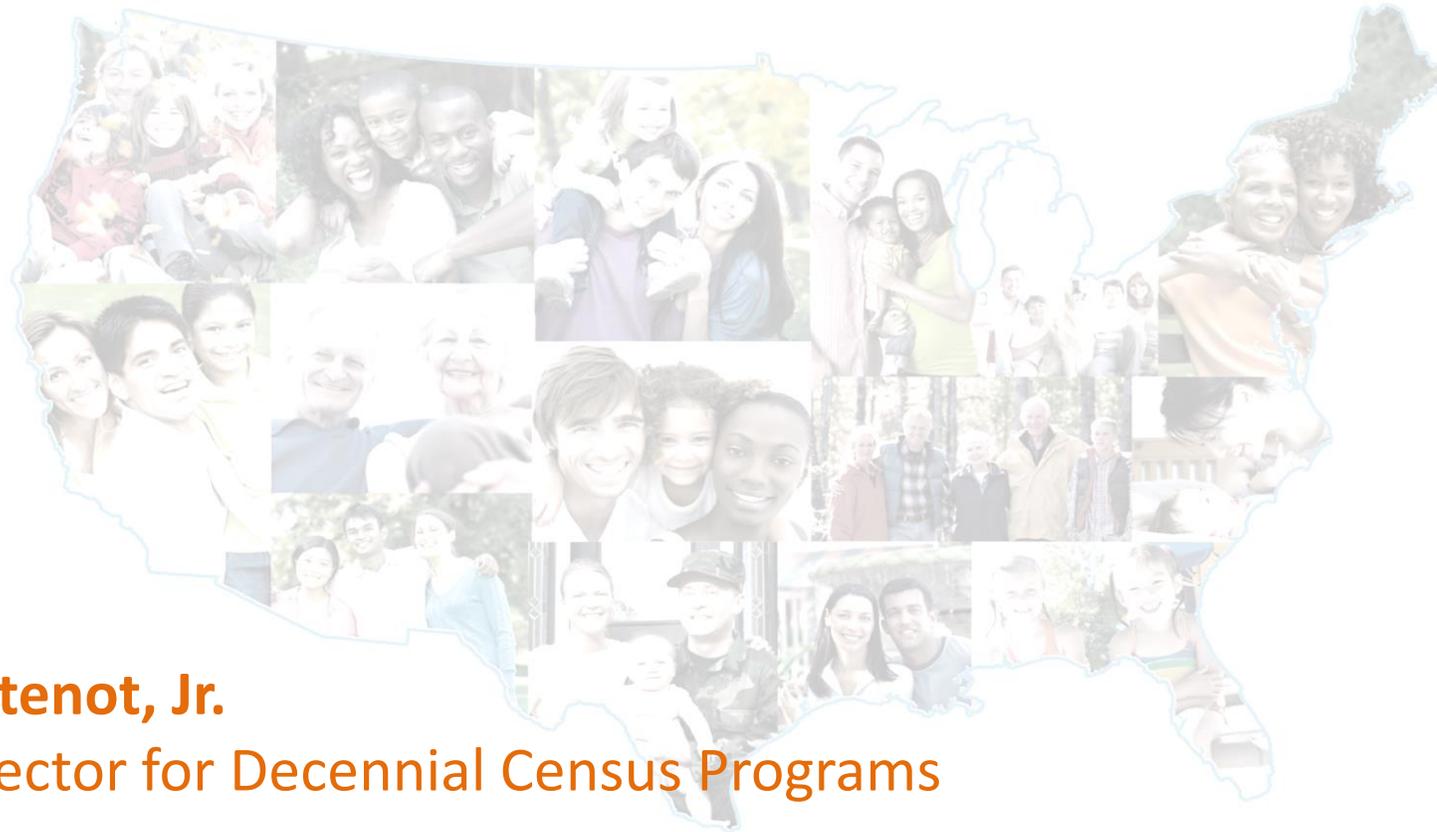
Decennial Census Programs
U.S. Census Bureau

August 3, 2018



The original version of slide 6, “Where are We Now” has been revised.

Welcome



Albert E. Fontenot, Jr.
Associate Director for Decennial Census Programs

Welcome

Housekeeping Items

- Meeting is being broadcast via a publicly available web broadcast
 - Consider all microphones live at all times when having sidebar conversations
- For questions, please remember to speak directly into the microphones for the benefit of other participants, including those watching via any external broadcast
 - 2020.census.pmr@census.gov
- There are legal requirements we must follow when talking with contractors or potential contractors
 - Information from Molly Shea, Assistant Division Chief, Acquisition Division
- Location of restrooms – next to elevators in green (just outside the auditorium)
- Emergency exits

THANK YOU

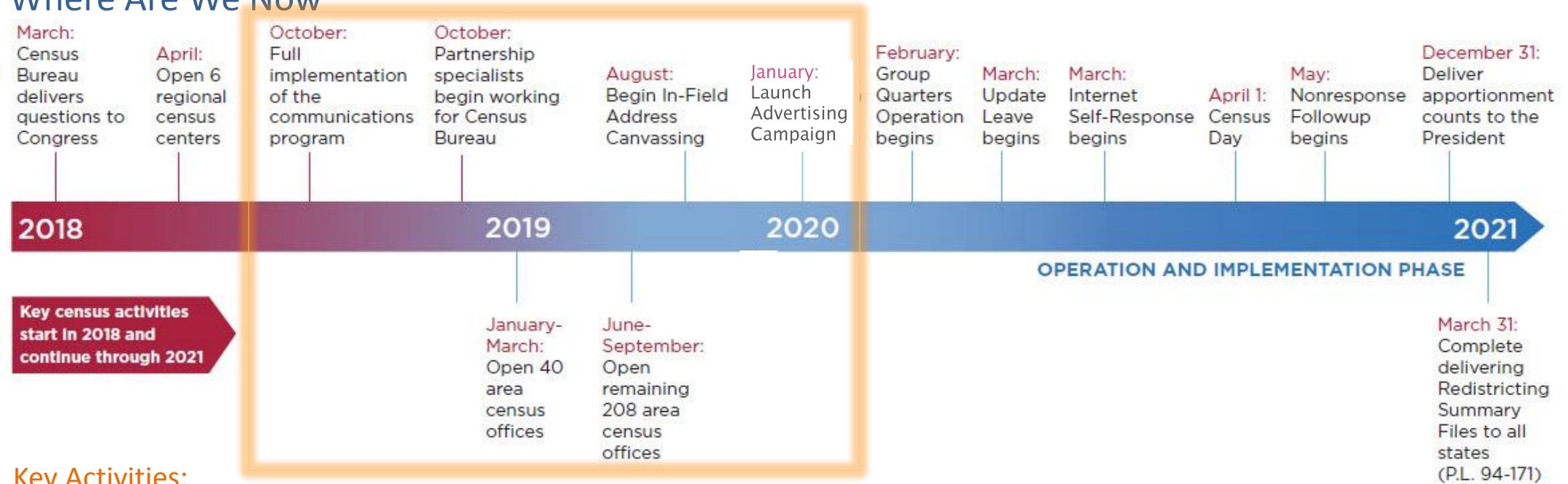
Welcome

Today's Agenda

- Welcome and High-Level Program Updates
- 2020 Census Cybersecurity Update
- Update on Testing
 - 2018 End-to-End Census Test
 - 2018 End-to-End Census Test: Self-Response
 - 2018 End-to-End Census Test: Nonresponse Followup
 - 2018 End-to-End Census Test: Group Quarters
 - Wrap-up and Final Remarks on Testing Status
- 2020 Census Systems Readiness Update
- 2020 Census Program Management
 - 2020 Census Program Management
 - 2020 Census Master Integrated Schedule
 - 2020 Census Risk Management
- Wrap-Up

2020 Census

Where Are We Now



Key Activities:

- **2018 End-to-End Census Test:** Census Day for the test was April 1. The Self-Response and Nonresponse Followup phases ended on July 31. The Group Quarters operation started on July 30 and will end on August 24.
- **Area Census Office Leasing:** Lease awards have been granted to all 40 Wave 1 ACOs and 70 of the 208 Wave 2 ACOs. Wave 1 offices are scheduled to open in January 2019 and Wave 2 offices are scheduled to open between June and September 2019.
- **Communications Program Planning:** As the research is being completed this Summer, we are working with our contracting team to begin development for the media plans, messaging, and creative treatments.
- **Partnership Program -- Increasing from 1,000 to 1,500 Partnership Specialists:** We are in the process of adding an additional 70 Partnership Specialists this summer and our goal by June of 2019 is to ramp up to approximately 1,500 Partnership Specialists.
- **Complete Count Committees:** 39 states or state-equivalents have formed 2020 Census Complete Count Committees, and an additional 11 are considering forming committees. Complete Count Committees comprise a broad spectrum of government and community leaders that develop and implement a 2020 Census awareness campaign based on their knowledge of the local community to encourage a response.

The 2020 Census

Major Contracts*

Contract Status

Awarded

Pre-Award

Technical Integrator

**Vendor: T-REX Solutions, LLC
(17 subcontractors)**

Ensures 2020 Census System of Systems (SoS) integrates, performs, scales, is secure, and meets business objectives.
Provides 2020 Census Cloud and On Premise Infrastructure.
Provides systems integration and testing.

CEDCaP - ECaSE

**Vendor: ImmixGroup/Pega
(subcontractor)**

ECaSE development services support new data collection systems. These systems support the operational control systems for Address Canvassing and Nonresponse Followup, and the data collections systems for Nonresponse Followup and Self-Response which includes internet and telephone.

Decennial Device as a Service (dDaaS)

Vendor: CDW-G (8 subcontractors)

Provides Mobile Devices for Field Data Collection Operations.
Software Integration, Cellular, Logistics, Shipping, Asset Management, Break/Fix and Disposition.

Field IT Deployment (FITd)

Vendor: Unisys Corporation

Provides the IT infrastructure for 2020 Census field sites.
IT & Telecommunications Hardware, Image Integration, Logistics, Shipping, Installation, Break/Fix and Disposition.
Regional Census Centers
Area Census Offices
Island Area Censuses Offices
Paper Data Capture Centers

Census Questionnaire Assistance (CQA)

Vendor: GDIT (10 subcontractors)

Provides call center capability for self-response, assist respondents with responding to and completing census questionnaire, and provides Interactive Voice Response.

C-SHaRPS – Recruiting & Selection

Vendor: CSRA (5 subcontractors)

Provides recruiting and selection and Learning Management System COTS for up to 400K concurrent Schedule A Field Staff.

Integrated Communications

Vendor: Y&R (19 Subcontractors)

Supports the advertising and partnership program.

C-SHaRPS Fingerprinting

Vendor: IndraSoft, Inc

Provides fingerprinting services for field staff.

2020 Census Print and Mail

Vendor: TBD

Provides the majority of printing and mailing services for the 2020 Census.

Note: Decennial Service Center (DSC) is removed from DCEO contracts and functions will be fulfilled by other areas

*This slide represents the status of major contracts for the 2020 Census and is not an exhaustive list of contracts or contract opportunities

The 2020 Census

Major Contracts: 2020 Printing and Mailing

- The Judge in the bankruptcy case of Cenvéo signed an order approving the settlement agreement by and among the debtors and the United States of America allowing the termination of the Census Print Contract with Cenvéo with a \$5.5 million settlement agreement payment on July 27, and Cenvéo remains obligated to destroy or sanitize all Title 13 data at no additional cost. Cenvéo will receive separate payment of work already performed and accepted but not invoiced on the 2018 End-to-End Census Test.
- Solicitation for a replacement contract is forthcoming in early August with an expected award of November 2018.

The 2020 Census

Major Contracts: Field IT Deployment Contract (FITd)

- Census awarded the Field IT Deployment Contract to Unisys Corporation on August 1, 2018.
- The FITd contract is responsible for providing, staging, provisioning, packaging, shipping, installing and testing tracking equipment, and providing technical support on all equipment (e.g., troubleshooting, replacing, repairing) for 248 Area Census Offices, 2 Paper Data Capture Centers, the Puerto Rico Area Office, 5 Island Area Offices, and 1,500+ remote workers.
- The FITd contract is also responsible for providing on-site personnel for help desk services and on-site system administration support for all equipment and software at 2 Paper Data Capture Centers (e.g., troubleshooting, replacing, repairing, installing, configuring, patching) and will be responsible for providing technical support on all equipment at Regional Center Centers.
- The FITd contract is also responsible for decommissioning (e.g., de-installing, sanitizing, collecting, returning) the equipment to ALL sites.

Cyber Security and Maintaining Public Trust

Kevin Smith
Chief Information Officer

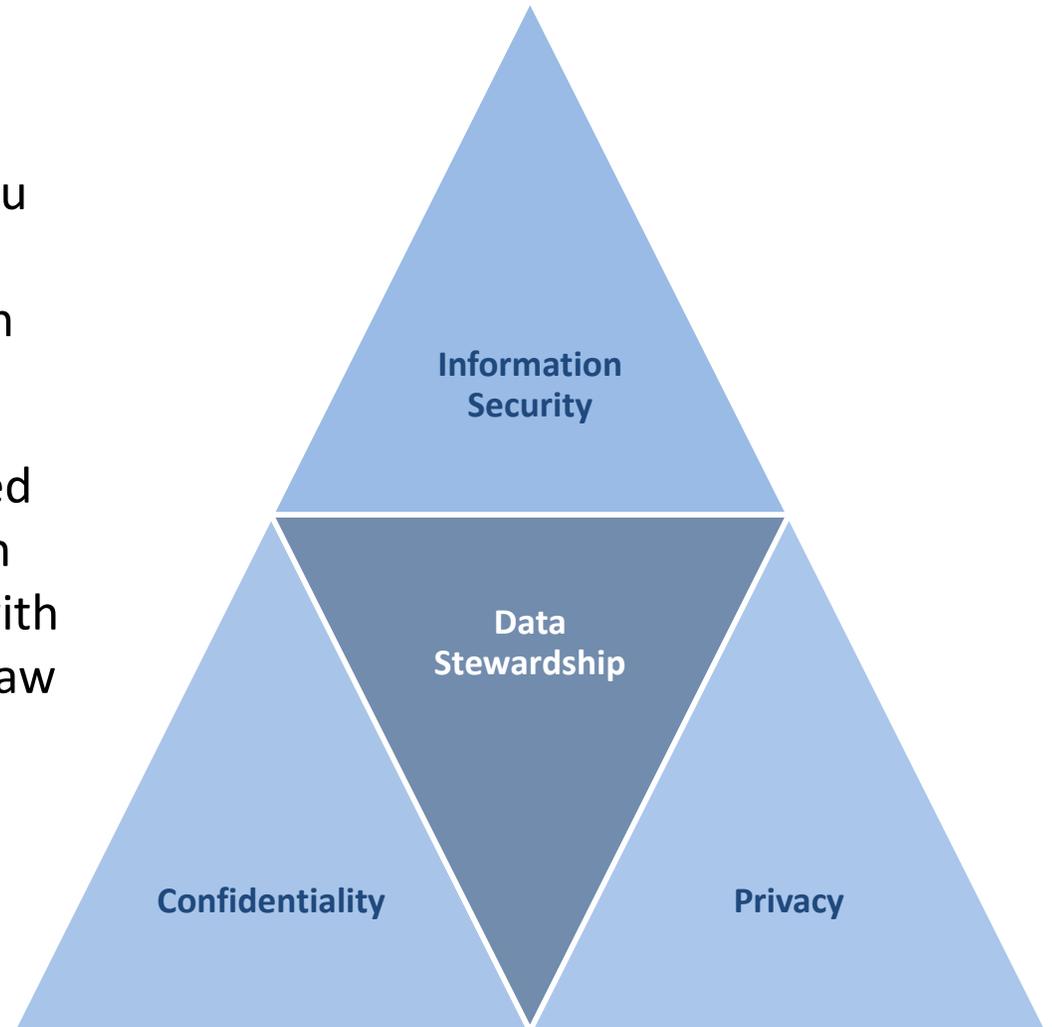


Census Data Stewardship

Our Culture Values Data Security

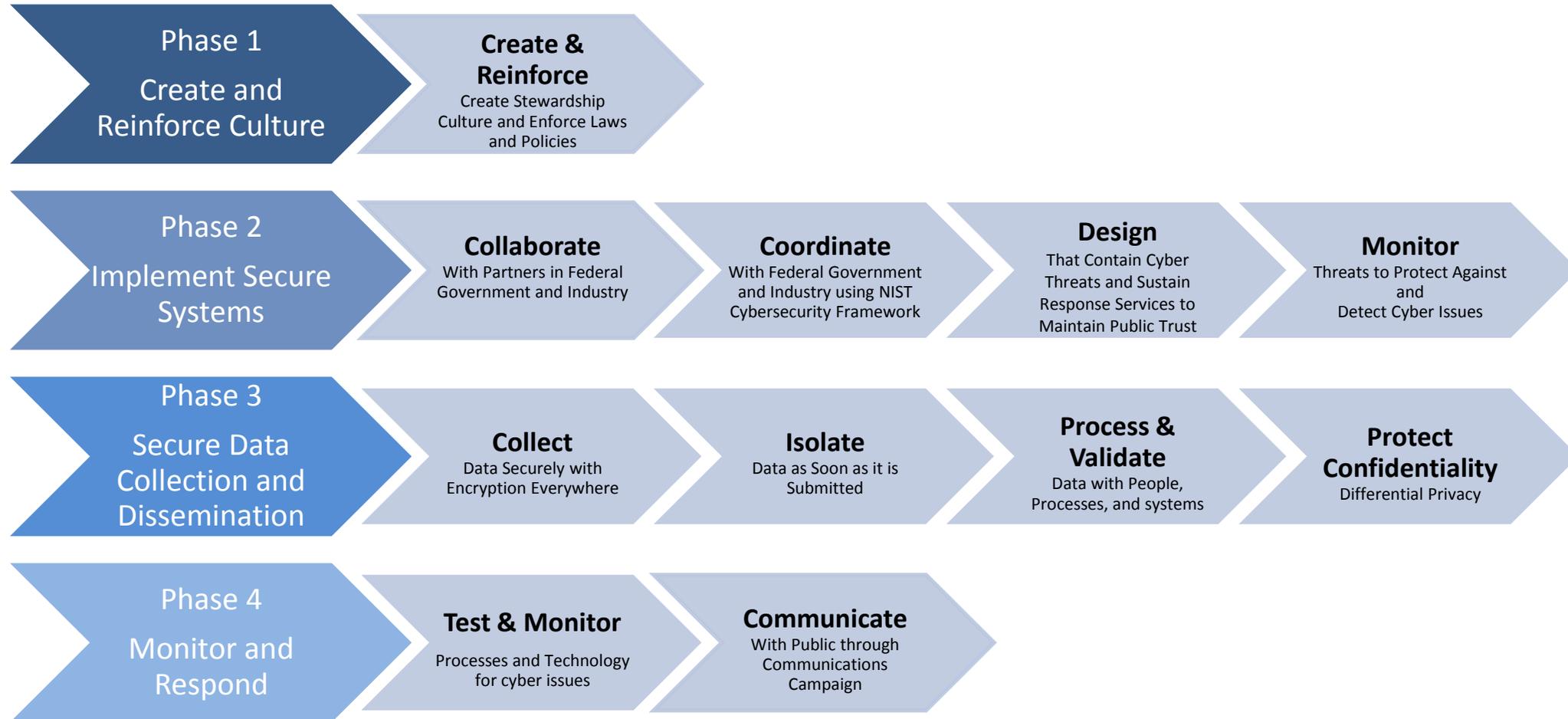
Data Stewardship is the formal process the Census Bureau uses to care for respondent information — from the beginning, when a respondent answers, to the end, when the statistical data products are released.

Data Stewardship is a comprehensive framework designed to protect information over the course of the information lifecycle, from collection to dissemination, and it starts with creating a culture of confidentiality that is based on the law and designed to maintain public trust.



Census Data Stewardship

Our Overall Approach to Maintain Public Trust



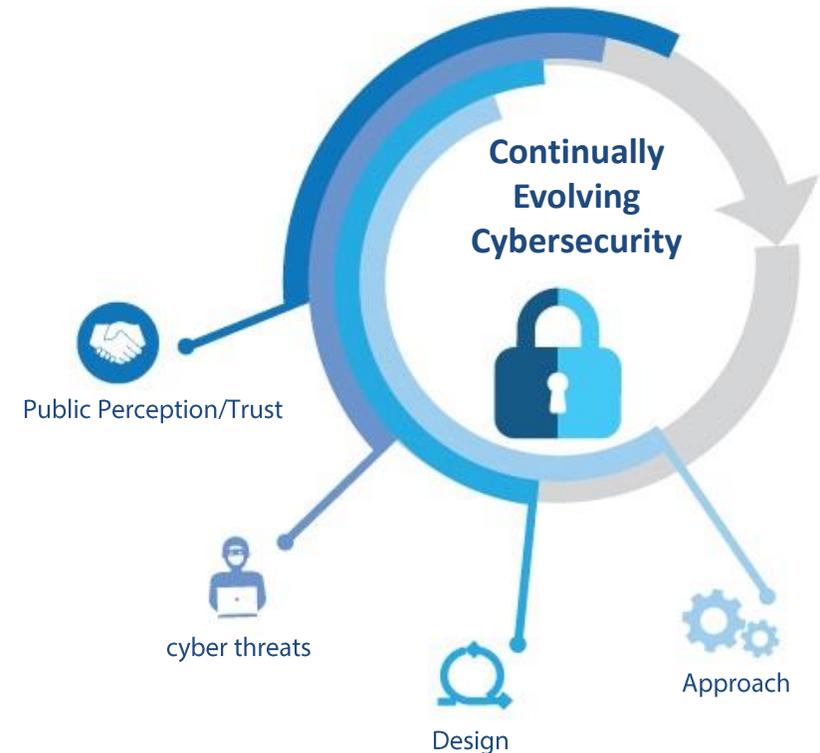
2020 Census Cyber Security

Our Cyber Security Approach

Cybersecurity program focus areas:

- Improving **public perception and trust**.
- Proactively addressing **cyber threats** through **design** and **approach**
- Respond immediately to contain threats
- Partnerships to understand and manage threats
 - Federal intelligence community
 - Private industry

**sharing detailed solutions, systems, processes*



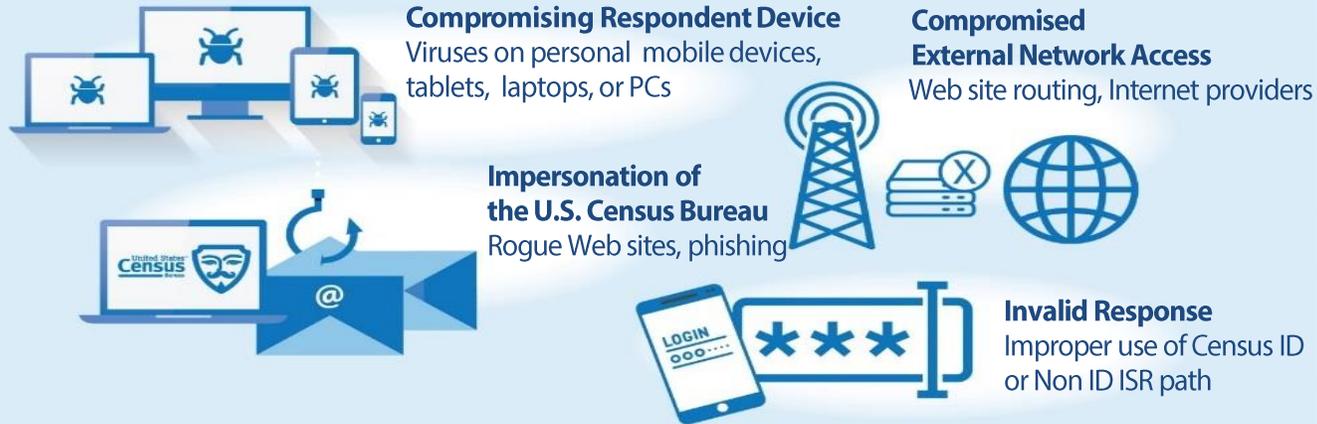
Cyber Threat Landscape

Continuously Evolving

Cyber Threats



External Threats
Beyond U.S. Census Bureau Control



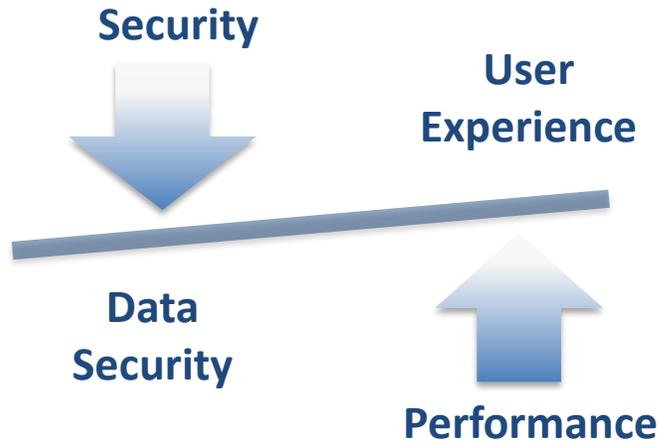
Internal Threats
Within U.S. Census Bureau Control



- **External** - Rely on industry and other federal agencies to provide services to resolve threats
- **Internal** - Monitor and directly respond to internal threats to Census Bureau systems through design and approach

Secure System Design

Designed to Contain, Sustain, and Maintain Public Trust



Census design is focused 1st on data security to protect respondents' data and 2nd on user experience so that respondents may confidently respond to the 2020 Census

Contain Issues + Sustain Services = Maintain Public Trust

Employ “Physical Security” Techniques

- “Layer” physical entry with the appropriate level of security (doors, walls)
- “Isolate” separate areas within layers to efficiently handle interactions (lines, guards)
- Lock down valuables behind closed doors (vaults, safes)

External Cyber Threat Mitigation

Relying on Partnerships



External Threat Mitigation Strategies	
Compromising Respondent Device	<ul style="list-style-type: none"> Minimal storing of data on device Encryption of data in-transit for website communications Proactive public outreach and awareness campaign
Compromised External Network Access	<ul style="list-style-type: none"> Proactive monitoring of site performance and activity Proactive monitoring for unauthorized or unusual connection attempts Industry and interagency coordination and information sharing
Impersonation of U.S. Census	<ul style="list-style-type: none"> Proactive identification of rogue websites Interagency coordination and information sharing Proactive public outreach and awareness campaign
Invalid Response	<ul style="list-style-type: none"> Automated analysis of individual responses to identify irregularities Analysis of identified irregularities Data flow analysis

Internal Cyber Threat Mitigation

Monitoring and Directly Responding



Internal Threats
Within
U.S. Census Bureau
Control

Internal Threat Mitigation Strategies	
Disruption to the Internet Self Response Web Site	<ul style="list-style-type: none"> • Monitoring for traffic spikes and unusual activity in systems/applications • Proactive identification of malicious traffic and robots • Cyber threat intelligence (federal, commercial, state, and local government) • Designed to sustain self response services • Use of Distributed Denial of Service (DDoS) protection services
Data Breaches	<ul style="list-style-type: none"> • Monitoring for irregular data flows • Monitoring for unauthorized access • Encryption of data in-transit and at-rest • System/application penetration testing • Security management, monitoring, and analytics • Timely patch management • Cyber awareness training • Proactive public outreach and awareness campaign
Compromised Employee Devices	<ul style="list-style-type: none"> • Encryption of data in-transit and at-rest • Remote wipe capability • Monitoring user activity and detection of malicious end user • Two factor authentication • Phishing tests

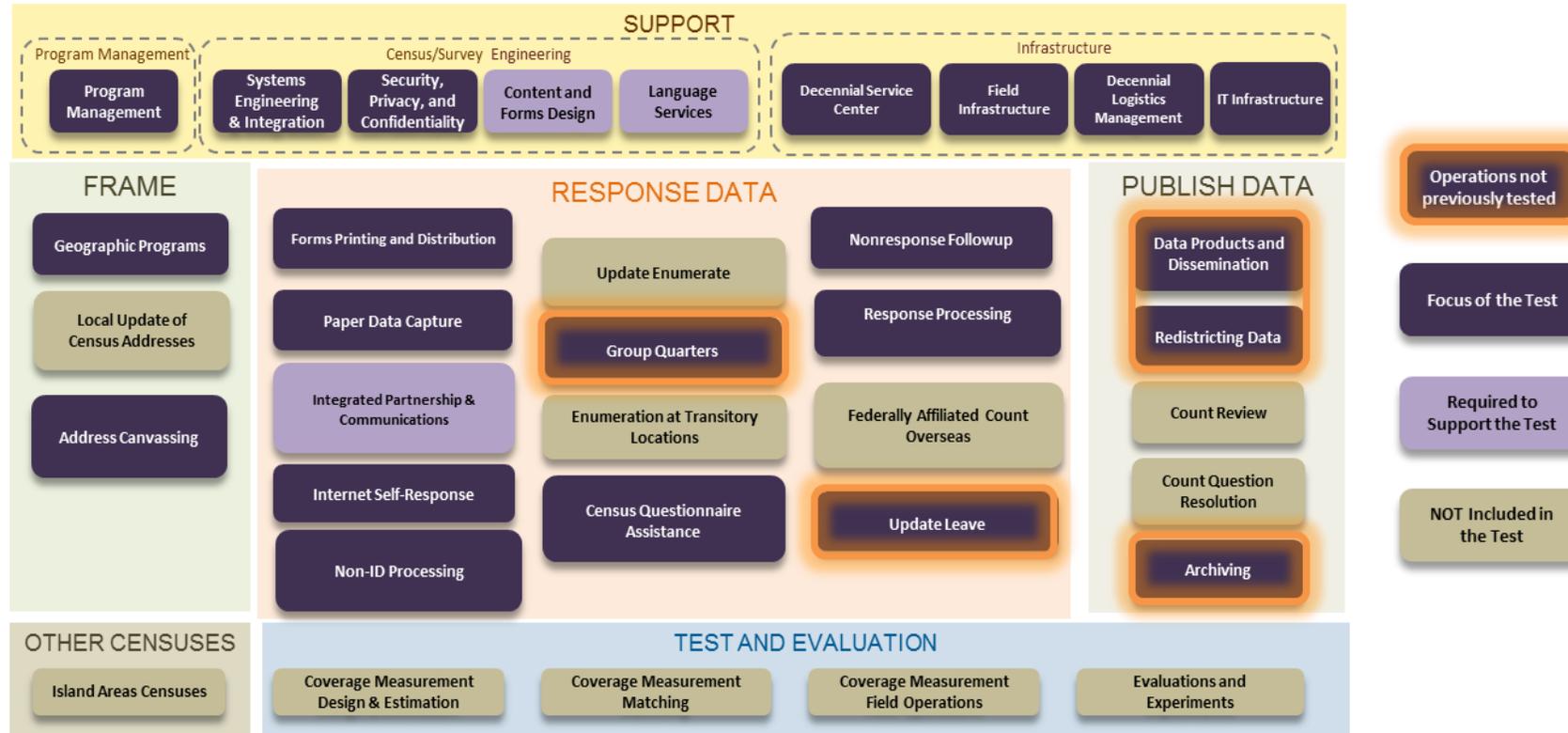
QUESTIONS?

2018 End-to-End Census Test Update

Deborah Stempowski
Decennial Census Management Division



2018 End-to-End Census Test Operational Scope



2018 End-to-End Census Test: Self-Response

Alexa Jones-Puthoff

Decennial Census Management Division



2018 End-to-End Census Test: Self-Response

Agenda

- 2018 End-to-End Census Test Operational Testing
- 2018 End-to-End Census Test Mail Strategy and Sample
- 2018 End-to-End Census Test Results
 - Self-Response Overview
 - Self-Response by Mode and Panel
 - Self-Response by Mode Over Time
 - Census Questionnaire Assistance
- United States Postal Service (USPS) Partnership
- Moving from the 2018 End-to-End Census Test to the 2020 Census

2018 End-to-End Census Test: Self Response

Operational Testing in 2018

Internet Self-Response

- Utilized ECaSE platform
- Languages available: English and Spanish

Census Questionnaire Assistance

- Utilized Census Questionnaire Assistance contracted solution
- Interactive Voice Response (IVR) system active
- Live agents taking responses by phone
- Languages supported: English, Spanish, Chinese (Mandarin, Cantonese), Vietnamese, Korean, Russian, and Arabic

Paper Data Capture

- Utilized updated scanning equipment
- Refined operational design
- Refined paper control processes

Forms Printing and Distribution

- Refined print/mail and quality control procedures

2018 End-to-End Census Test

Self-Response Mail Strategy

Self-Response

- Self-response contact strategy: two-panel design
- ~277k housing units in sample
 - ~195k (70.3 percent) Internet First (invitation letter on first contact)
 - ~82k (29.7 percent) Internet Choice (questionnaire on first contact)
- Languages: English and bilingual (English/Spanish)
 - ~200k English
 - ~76k Bilingual (English/Spanish)

March							April						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
				1	2	3	①	2	3	4	5	6	7
4	5	6	7	8	9	10	8	9	10	11	12	13	14
11	12	13	14	15	16	17	15	16	17	18	19	20	21
18	19	20	21	22	23	24	22	23	24	25	26	27	28
25	26	27	28	29	30	31	29	30					

Dates in the table below are in-home dates.

Panel	Cohort	Mailing 1 <i>Letter (Internet First) or Letter + Questionnaire (Internet Choice)</i>	Mailing 2 <i>Letter</i>	Mailing 3* <i>Postcard</i>	Mailing 4* <i>Letter + Questionnaire</i>	Mailing 5* <i>"It's not too late" Postcard</i>
Total Volumes	All	276,589	276,589	250,140	198,924	187,467
Internet First	1	March 16, 2018	March 20, 2018	March 30, 2018	April 12, 2018	April 23, 2018
	2	March 20, 2018	March 23, 2018	April 3, 2018	April 16, 2018	April 26, 2018
	3	March 23, 2018	March 27, 2018	April 6, 2018	April 19, 2018	April 30, 2018
Internet Choice	N/A	March 16, 2018	March 20, 2018	March 30, 2018	April 12, 2018	April 23, 2018

(*) Targeted only to nonrespondents

Periodic Performance Management Reports

2018 End-to-End Census Test: Self-Response of Housing Units

Self-Response of Housing Units

Status:

● On Track

Data current as of:

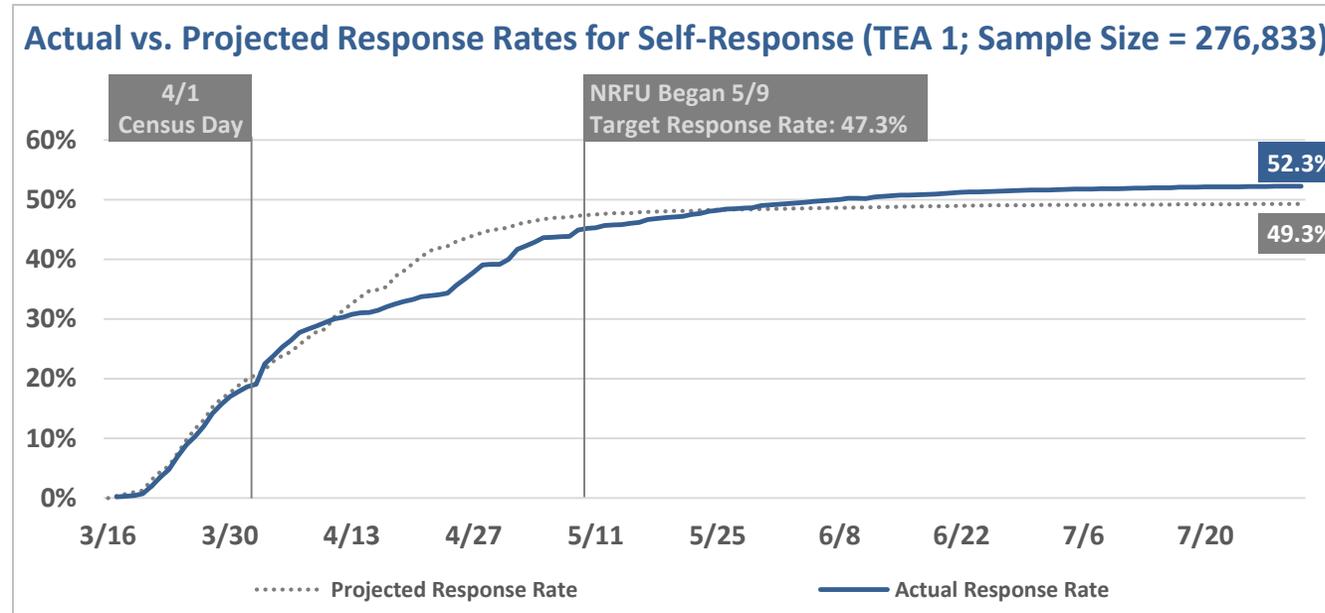
August 2, 2018

Completion Date:

August 31, 2018

Notes:

- Self-Response (TEA 1) began March 16, 2018.
- Update Leave (TEA 2) began April 9, 2018.
- Internet and phone self-response operations ended July 31, 2018.
- Paper data capture self-response operation ends August 31, 2018.
- The Response Rate is calculated using the number of responding households (unduplicated responses), which is 144,560.
- The initial housing unit workload in the Update Leave TEA was 1,799.



Response by Mode				
	Self-Response (TEA 1)		Update Leave (TEA 2)	
	Response Volume	Percent of TEA 1 Total Responses	Response Volume	Percent of TEA 2 Total Responses
Total Responses	147,266	100.0%	663	100.0%
Internet	90,116	61.2%	209	31.5%
Phone	10,989	7.5%	27	4.1%
Paper	46,161	31.3%	427	64.4%

Source: 9341 - Detailed Self-Response Summary Report, Update Leave Management Report

2018 End-to-End Census Test

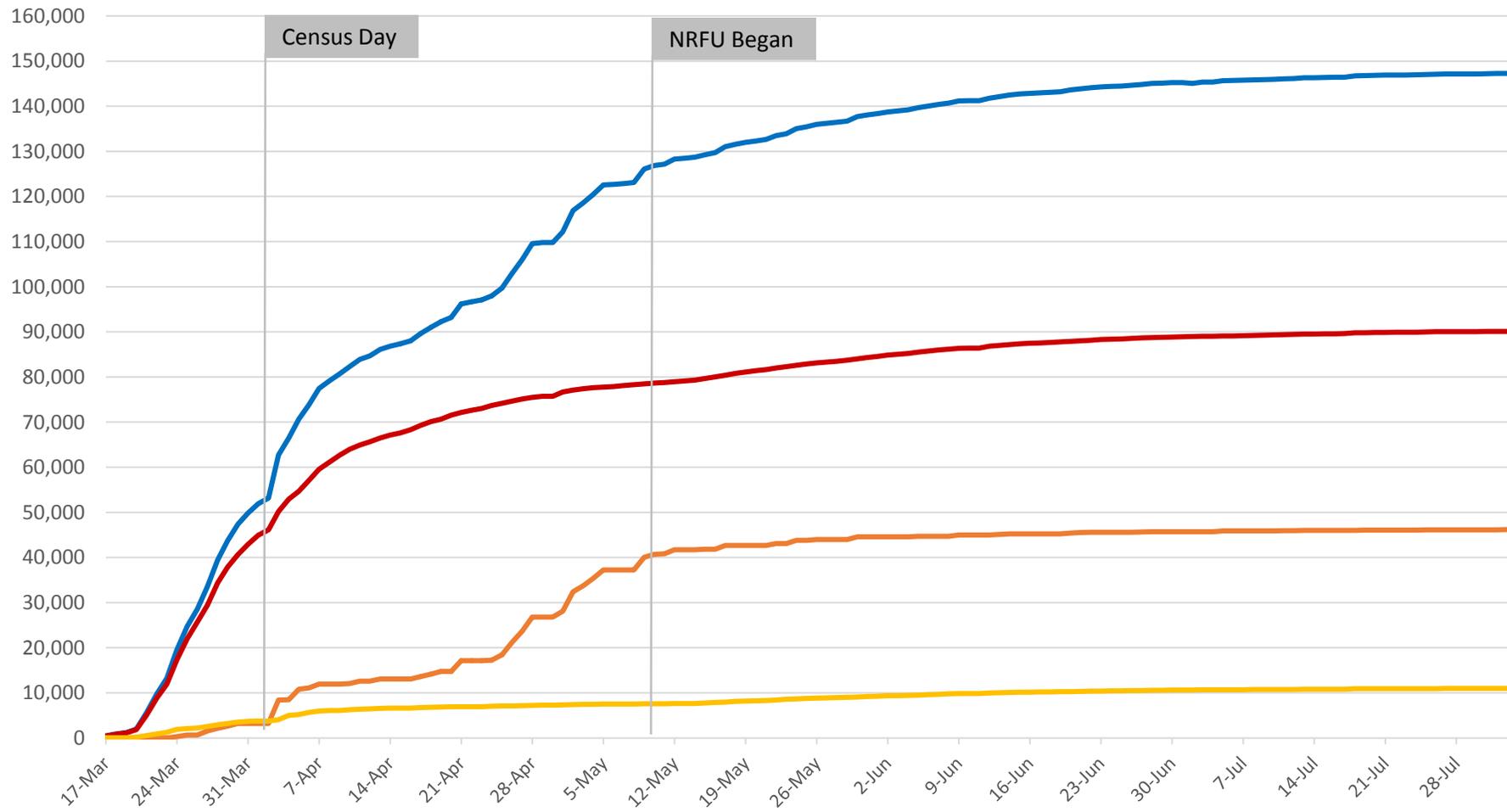
Preliminary Self-Response by Panel and Mode as of August 2, 2018*

Response by Panel and Mode								
	TOTAL, BOTH PANELS		INTERNET FIRST PANEL		INTERNET CHOICE PANEL		2018 PROJECTION	2020 PROJECTION
	Response Volume	Percent of TEA 1 Total Responses	Response Volume	Percent of Internet First Responses	Response Volume	Percent of Internet Choice Responses	Percent of TEA 1 Total Responses	Percent of TEA 1 Total Responses
Total Responses	147,266	100.0%	112,094	100.0%	35,172	100.0%	100.0%	100.0%
Internet	90,116	61.2%	78,219	69.8%	11,897	33.8%	59.2%	74.4%
Phone	10,989	7.5%	9,216	8.2%	1,773	5.0%	6.1%	7.1%
Paper	46,161	31.3%	24,659	22.0%	21,502	61.1%	34.7%	18.5%

*Self-response type of enumeration area (TEA 1) only.

2018 End-to-End Census Test

Preliminary Self-Response by Mode as of August 2, 2018*



Mailing #4 Questionnaires Delivered

- Total Responses, All Modes
- Total Internet Responses
- Total Paper Responses
- Total Phone Responses

*Self-response type of enumeration area (TEA1) only.

Periodic Performance Management Reports

2018 End-to-End Census Test: Census Questionnaire Assistance Inbound Calls

Inbound Calls Status

Status:

● *Completed*

Data current as of:

August 2, 2018

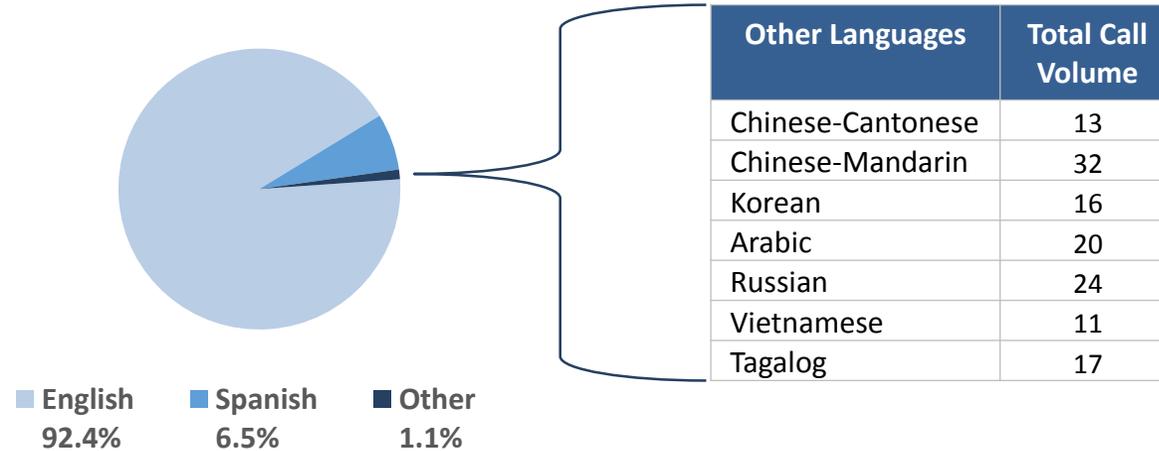
Completion Date:

July 31, 2018

Notes:

The deflection rate is the percentage of the calls that are resolved by an automated Interactive Voice Response function and do not require speaking with a customer service representative.

Total Call Volume by Language



Key Performance Metrics	Planned	Actual
Call Volume	20,705	19,241
Deflection Rate	30.0%	25.90%
Service Level – 30 Seconds	80%	99.0%
Avg. Handle Time	9:45	11:28

Source: Daily Briefing Report: Census Questionnaire Assistance

Periodic Performance Management Reports

2018 End-to-End Census Test: USPS Partnership Kiosks and Informed Delivery

USPS Partnership Kiosks and Informed Delivery

Status:

● Completed

Data current as of:

July 31, 2018

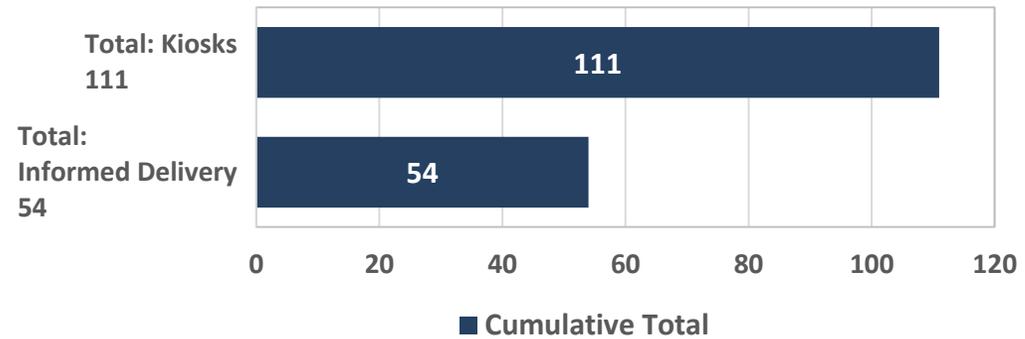
Completion Date:

July 31, 2018

Notes:

- Kiosks were installed on April 2, 2018.
- 30 of the 33 Post Offices in Providence County, RI had Kiosks.
- 27 of the 30 participating Post Offices generated Kiosk activity.
- Informed Delivery outreach started March 16, 2018.
- There are ~15,000 Informed Delivery subscribers in Providence, RI.

Internet Self-Responses (ISR)



Informed Delivery Email

	Emails Sent	Emails Opened	Clicked "Respond Now"	ISR Initiated	ISR Submitted
Mailing 1	7,445	5,273	317	25	3
Mailing 2	7,393	5,233	202	17	12
Mailing 3	6,246	4,239	133	21	15
Mailing 4	4,628	3,014	89	23	16
Mailing 5	4,407	2,851	60	10	8
Total	30,119	20,610	801	96	54

Source: USPS + Census Partnership: 2018 Census Test Report

2020 Census

Self-Response: Moving from the 2018 End-to-End Census Test to the 2020 Census

- Internet Self-Response (ISR)
 - Add languages to the ISR instrument, expanding to 13 total languages (English, Spanish, Chinese, Vietnamese, Korean, Russian, Arabic, Tagalog, Polish, French, Haitian Creole, Portuguese, Japanese)
- Census Questionnaire Assistance (CQA)
 - Expand required language support to 13 total languages
 - Determine locations of commercial contact center facilities
- Paper Data Capture (PDC)
 - Open two Paper Data Capture Centers (East and West)
- Forms Printing and Distribution (FPD)
 - Create connection between the Census Bureau and the print vendor for the transmission of address files
 - Automate collection and transmission of in-plant quality control records

QUESTIONS?

2018 End-to-End Census Test: Nonresponse Followup

Jennifer W. Reichert
Decennial Census Management Division



2018 End-to-End Census Test: Nonresponse Followup

Agenda

- Objectives for 2018 End-to-End Census Test
- Nonresponse Followup Workload
- Performance Reports
- Successes
- Administrative Record Modeling
- Getting from the 2018 End-to-End Census Test to the 2020 Census

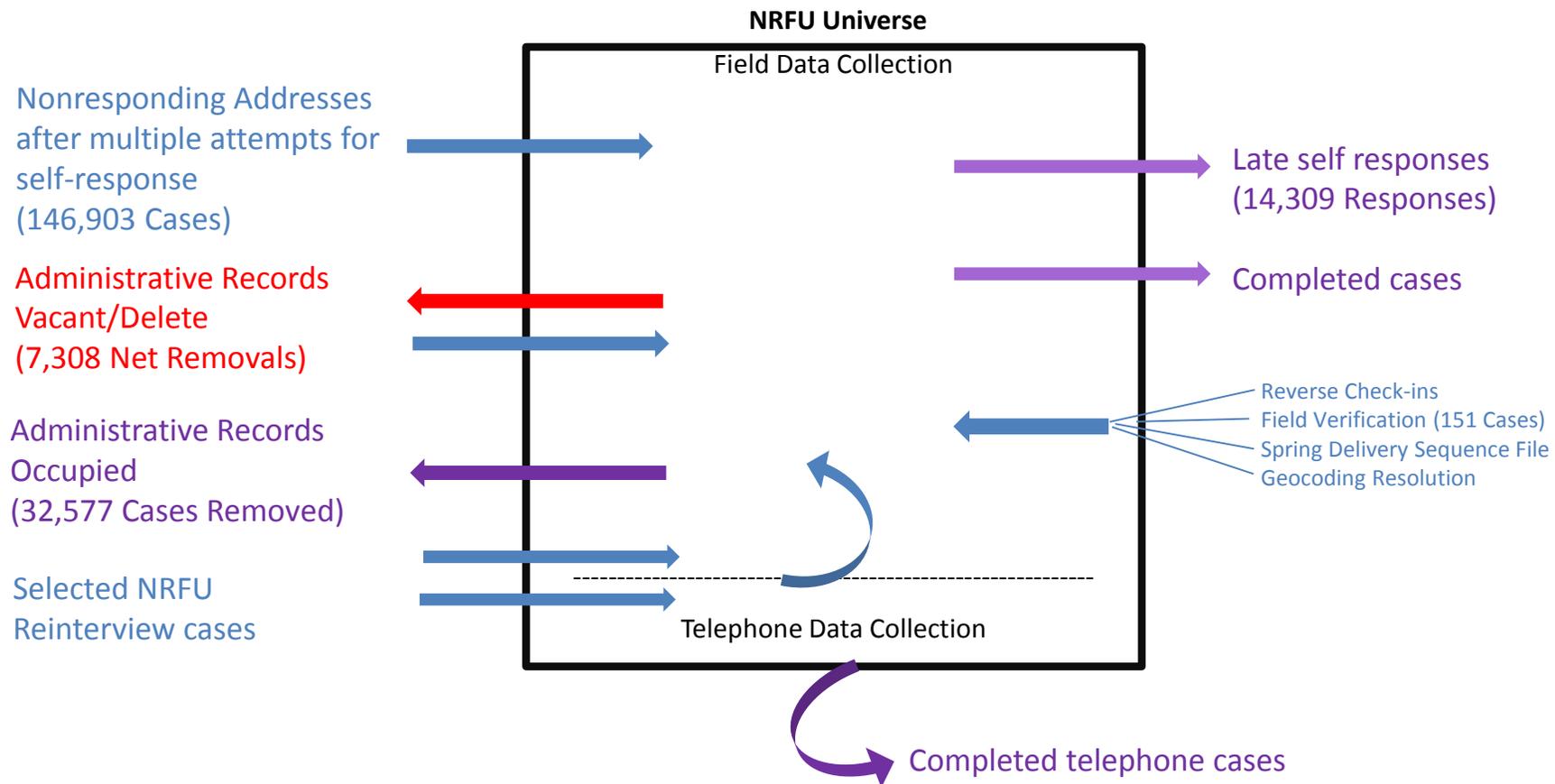
2018 End-to-End Census Test

Nonresponse Followup

Objectives

- Use of automated systems for recruiting, hiring, training, enumeration, and payroll
- Use of Administrative Records to reduce the NRFU workload
 - Vacant/Delete
 - Occupied

2018 End-to-End Census Test Nonresponse Followup Workload



Periodic Performance Management Reports

2018 End-to-End Census Test: Nonresponse Followup Progress

Nonresponse Followup Progress

Status:

● *On Track*

Data current as of:

August 2, 2018

Completion Date:

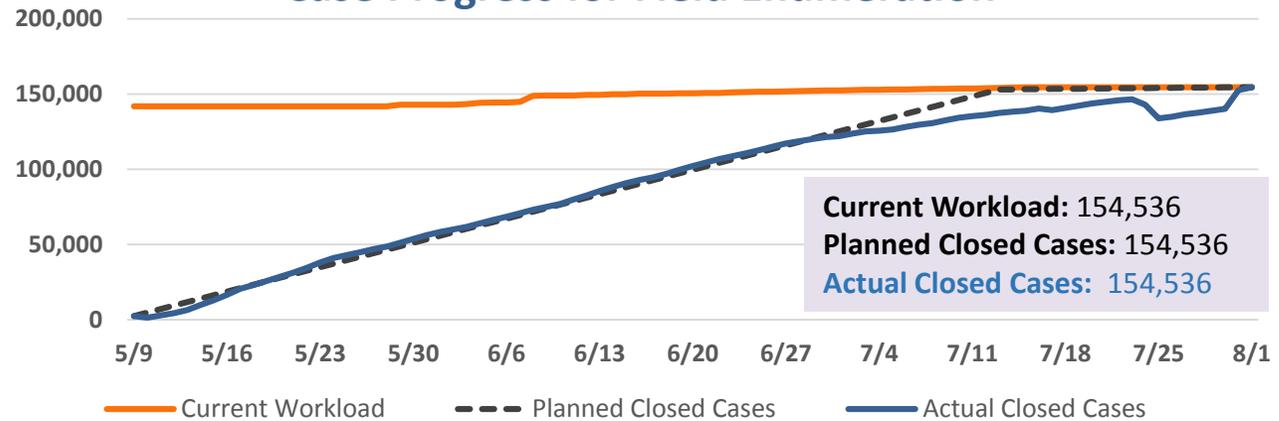
NRFU production and NRFU RI ended on 7/31.

Notes:

- NRFU RI began on 6/1
- As of 7/17, NRFU RI cases are no longer being sent for field enumeration
- The number of actual closed cases begins to fluctuate as cases are reopened during the final attempt phase of the operation

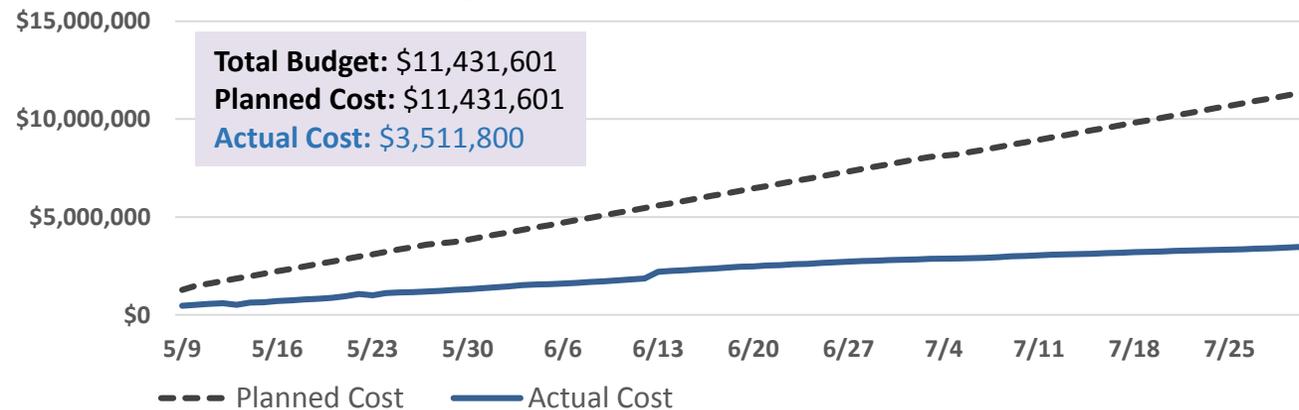
Cases Closed by Self-Response: 14,309
Remaining Workload: 0

Case Progress for Field Enumeration



Source: MOJO Optimizer

Projected vs Actual Total Cost



Source: Unified Tracking System

2018 End-to-End Census Test

Nonresponse Followup

Successes

- Automated recruiting, hiring, and training
- Deployed user-friendly enumeration instrument
- Implemented reengineered staffing and management structure
 - Streamlined staffing levels
 - No more face-to-face meeting requirements
- Optimized case assignments and routing
- Used administrative records data to reduce NRFU workload

2018 End-to-End Census Test

Nonresponse Followup

Administrative Records Modeling

- Vacant/Delete Housing Units – removed prior to any NRFU contacts
 - 10,862 Total Housing Units
 - 9,805 vacant housing units
 - 1,057 deleted housing units
 - 3,554 Cases returned to NRFU due to no UAA
- Occupied Housing Units – removed after one NRFU contact
 - 32,577 Total Housing Units
 - Phase 1 Modeling (May) – 31,896 housing units
 - Phase 2 Modeling (June) – 681 housing units (may have received >1 contact)

2018 End-to-End Census Test

Nonresponse Followup: Getting from the 2018 End-to-End Census Test to the 2020 Census

2018 Issues and Challenges:

- Automated training issues – clearing enumerators from training to production
- iPhone – touchscreen challenges (need for styluses)
- Notice of Visit – need hard surface
- Proxy path – looping, enumerator/respondent burden
- Alerts – determine most appropriate triggers and criteria

2018 End-to-End Census Test

Nonresponse Followup: Getting from the 2018 End-to-End Census Test to the 2020 Census

- Browse Living Quarters
- Mapping Application
- In-field Adds
- Dangerous Addresses Database
- New work availability functionality (submitting multiple time slots in a day)
- Stop/restart an operation
- Releasing child cases the day of the MV (after 4pm and on weekends)
- Additional reports (FOCS and UTS) for monitoring the operation
- PR adaptations and updates
- Early NRFU
- Addition of response recollect cases and other supplemental workloads (i.e., LUCA appeals, new construction, etc.)

QUESTIONS?

2020 Group Quarters Data Collection

Judy G. Belton

Decennial Census Management Division



2020 Group Quarters Data Collection

Agenda

- What are Group Quarters?
- Group Quarters Objective
- Status of the 2018 End-to-End Census Test

2020 Group Quarters Data Collection

What are Group Quarters?

A group quarters is a place where people live or stay, in a group living arrangement, that is owned or managed by an entity or organization providing housing and/or services for the residents. This is not a typical household type living arrangement. People living in group quarters are usually not related to each other. Examples are -

- Correctional Facilities for Adults
- Correctional Facilities for Juveniles
- Nursing/Skilled Nursing Facilities
- College/University Student Housing
- Group Homes for Adults
- Residential Treatment Centers
- Military Barracks
- Emergency and Transitional Shelters
- Soup Kitchens
- Regularly Scheduled Mobile Food Vans
- Targeted Non-Sheltered Outdoor Locations



2020 Group Quarters Data Collection

Two Phase Operation

Group Quarters (GQ) data collection is a two phase operation – Advance Contact and Enumeration

Objectives

- Reduce respondent burden by limiting the number of visits to the group quarters
- Take advantage of the use of facility-provided records, collected both electronically and in paper format for the enumeration process

2018 End-to-End Census Test

Group Quarters Operation

- Advance Contact to Service-Based Facilities and Group Quarter Facilities

- June 18 – July 10



- Service-Based Enumeration (SBE)

- July 25 – July 27



- Group Quarters Enumeration (GQE)

- July 30 – August 24



2018 End-to-End Census Test

Advance Contact Workload

The Providence GQ workload included most Group Quarters Types

Group Quarters Type	Workload
Service Based Enumeration Locations (Emergency and Transitional Shelters, Soup Kitchens, Regularly Scheduled Mobile Food Vans, Targeted Non-Sheltered Outdoor Locations)	143
Correctional Facilities for Adults	12
Juvenile Facilities	31
Nursing/Skilled-Nursing	119
College/University Student Housing	154
Religious Group Quarters	42
Group Homes and Residential Treatment Centers	147

2018 End-to-End Census Test

GQ Advance Contact

The Production Control System (PCS)

- ACO Clerks used an in-house system, the Production Control System (PCS) to conduct Advance Contact
- The PCS displays the Group Quarters name, address, Group Quarters type, and contact name. This information can be edited by the ACO Clerks
- ACO Clerks enters into the PCS --
 - The expected population on Census Day, April 1
 - The preferred enumeration method
 - Date and time for a personal visit to conduct data collection

2018 End-to-End Census Test

Advance Contact Enumeration Methods Offered

- Electronic Response Data Transfer or eResponse
- Paper Data Collection Options:
 - Facility Self-Enumeration
 - Drop-off/Pick-up
 - In-Person Interview
 - Paper Listing

Periodic Performance Management Reports

2018 End-to-End Census Test: Group Quarters Advanced Contact

Group Quarters Advanced Contact

Total Workload (including adds): 690

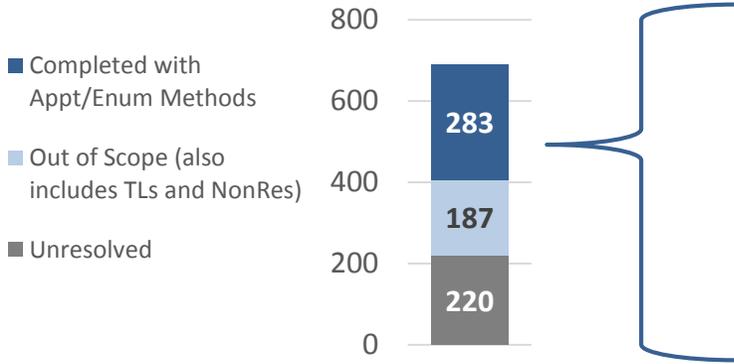
Status:
● Complete

Data current as of:
July 9, 2018

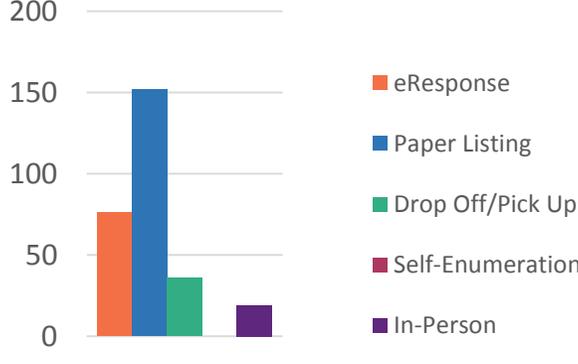
Completion Date:
July 10, 2018

- Notes:**
- The GQ Advanced Contact operation began June 18, 2018.
 - New GQs discovered as part of the GQ Advance Contact operation were mostly Service-Based locations. In order to thoroughly test the SBE operation, these facilities will be added and visited as part of SBE Operation.

Status of Advance Contact Cases



Breakdown of Enumeration Methods Selected



Periodic Performance Management Reports

2018 End-to-End Census Test: Service Based Enumeration and Group Quarters Enumeration

Service-Based Enumeration (SBE)

- 11 SBE interviews were confirmed during Advance Contact and enumerated
 - 7 Shelters
 - 3 Soup Kitchens
 - 1 Targeted Non-Sheltered Outdoor Location
- 14 SBE locations were non-interviews or refusals
- Targeted Non-Sheltered Outdoor Locations
 - 36 TNSOLS were added by our Partnership Specialists
 - 36 sites were enumerated
 - 32 persons interviewed

Group Quarters Enumeration (GQE)

- GQE started on July 30
- 200 of the 400 Group Quarters in GQE have been assigned to Enumerators for enumeration
- Letters have been mailed to 75 facilities that selected eResponse

QUESTIONS?

2020 Census

2018 End-to-End Census Test Operational Readiness and Status

Activity	Date	
Conduct In-Office Address Canvassing	October 27, 2016 – February 2, 2017	✓
Open Regional Census Centers	January 3, 2017	✓
Begin Address Canvassing Field Staff Recruitment	March 10, 2017	✓
Open Area Census Offices	April – July 2017	✓
Conduct In-Field Address Canvassing	August 28 – October 6, 2017	✓
Conduct Self-Response	March 16 – August 31, 2018	✓
Conduct Internet Self-Response, including Non-ID Processing	March 16 – July 31, 2018	✓
Conduct Census Questionnaire Assistance	March 16 – July 31, 2018	✓
Conduct Paper Data Capture	March 16 – August 31, 2018	✓
Census Day	April 1, 2018	✓
Conduct Update Leave	April 9 – May 4, 2018	✓
Conduct Coverage Improvement	April 13 – July 31, 2018	✓
Conduct Nonresponse Followup	May 9 – July 31, 2018	✓
Conduct Group Quarters Advance Contact	June 18 – July 10, 2018	✓
Conduct Group Quarters Service Based Enumeration	July 25 – July 27, 2018	✓
Conduct Group Quarters Enumeration	July 30 – August 24, 2018	✓
Publish Prototype P.L. 94-171 Data and Geographic Products	April 1, 2019	

2020 Systems Readiness

Atri Kalluri
Decennial Information Technology Division



2020 Census Systems Readiness

Agenda

- System Releases Supporting Ongoing Key Operations
- Key Systems Supporting Ongoing Operations
- Releases and Operations Look Ahead
- Key Systems Supporting Future Releases
- Key Systems to be Deployed
- Key Functions Supported by Systems
- Performance and Scalability Test Plan
- 2020 Census Systems Releases
- Systems Readiness for 2020 Census-Remaining Key Work

2020 Census Systems Readiness

2018 End-to-End Census Test

System Releases Supporting Ongoing Key Operations

Release (Operation)	Conduct Operation Date
Self-Response	February 12, 2018
Field Enumeration	March 14, 2018
Residual Coding	May 1, 2018
Group Quarters	June 11, 2018

2020 Census Systems Readiness

2018 End-to-End Census Test

Key Systems Supporting Ongoing Key Operations

Operation (Release)	Key Systems Supporting Operation
Self-Response	CaRDS, CDL, CQA, DRPS, ECaSE-ISR, ECaSE-OCS, Geospatial Services, iCADE, IDMS, IPTS, MAF/TIGER, PEARSIS, RTNP, SOA, UTS
Field Enumeration	CAES, CaRDS, CDL, CQA, DAPPS, DRPS, DSC, ECaSE-ENUM, ECaSE-FOCS, ECaSE-OCS, iCADE, IDMS, ILMS, IPTS, LiMA, MAF/TIGER, MCM, MOJO Optimizer, PEARSIS, R&A, SMarCS, SOA, UTS
Residual Coding	DRPS
Group Quarters	CDL, Centurion, ECaSE-ENUM, ECaSE-FOCS, ECaSE-OCS, iCADE, IDMS, MAF/TIGER, MOJO Recruiting Dashboard, R&A, SOA, UTS

2020 Census Systems Readiness

2018 End-to-End Census Test

Releases and Operations Look Ahead

Release (Operation)	Conduct Operation Date
Response Processing	October 1, 2018
Tabulation, Product Creation, and Dissemination	January 7, 2019

2020 Census Systems Readiness

2018 End-to-End Census Test

Key Systems Supporting Future Releases

Operation (Release)	Key Systems Supporting Operation
Response Processing	CDL, DRPS, FDS (SRQA), PEARSIS
Tabulation, Product Creation, and Dissemination	CaRDS, CDL, CEDSCI, DRPS, MAF/TIGER, PEARSIS, Tabulation, SOA

2020 Census Systems Readiness

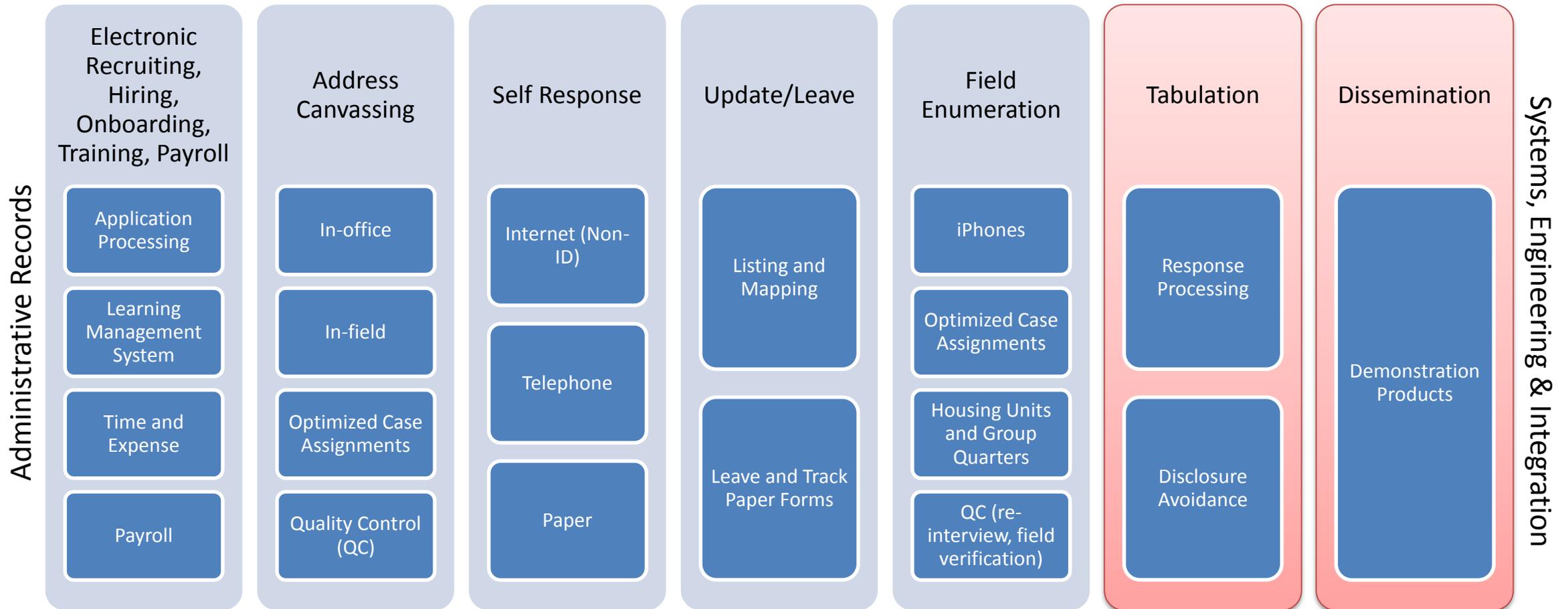
2018 End-to-End Census Test

Key Systems to be Deployed

System	Functionality	Timeline for Deployment
Fraud Detection System (Self Response Quality Assurance)	FDS will use a suite of custom-built statistical models and algorithms to identify potentially fraudulent returns in relation to self-response.	October 2018
Tabulation	Tabulation is the system that creates data products which are used to share the information collected during the 2020 Census regarding the number of people in the United States and where they are located.	January 2019
CEDSCI	CEDSCI is an enterprise-level dissemination system that provides access to prepackaged data products via an interactive web site. Data users will have access to the prepackaged data products, application programming interfaces (API), and metadata documentation.	January 2019

2018 End-to-End Census Test

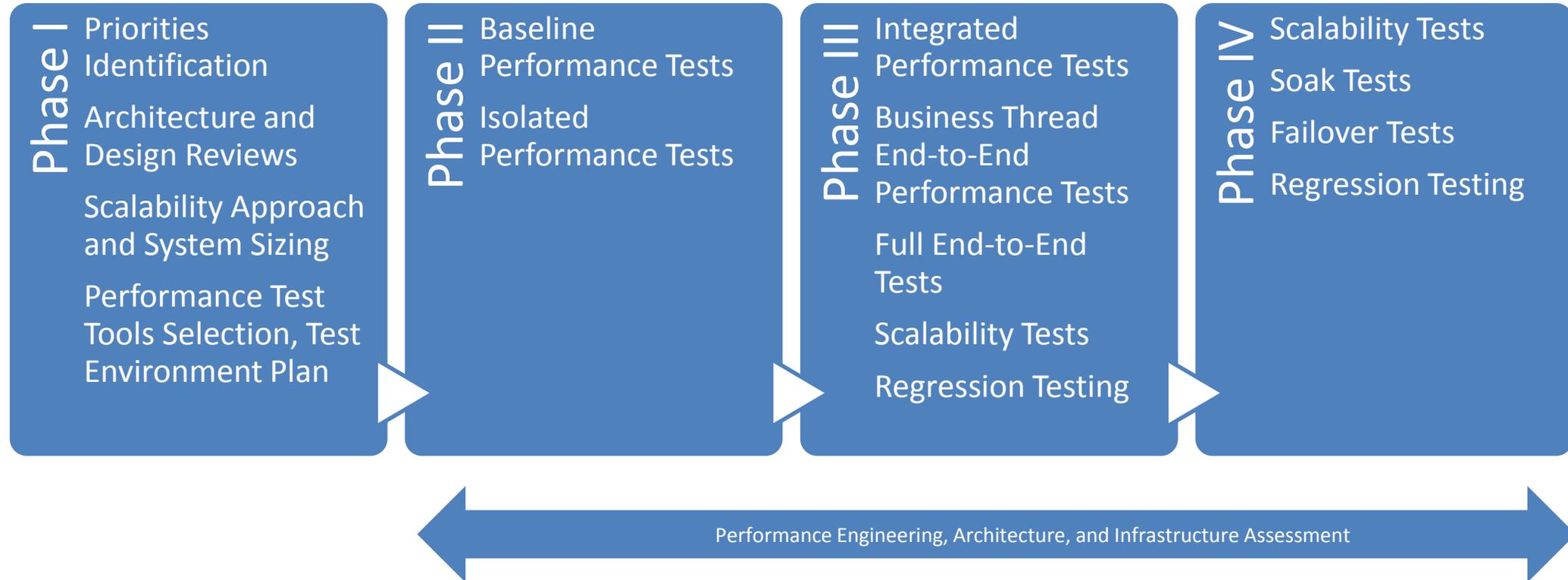
Key Functions Supported by Systems



Cloud, Data Center, Cyber-security, Field Deployment, Operations Center(s)

2020 Census Systems Readiness

Performance and Scalability Test Plan



2020 Census Systems Readiness

2020 Census Systems Releases

35 Operations, 52 Systems

4 Releases Originally Created

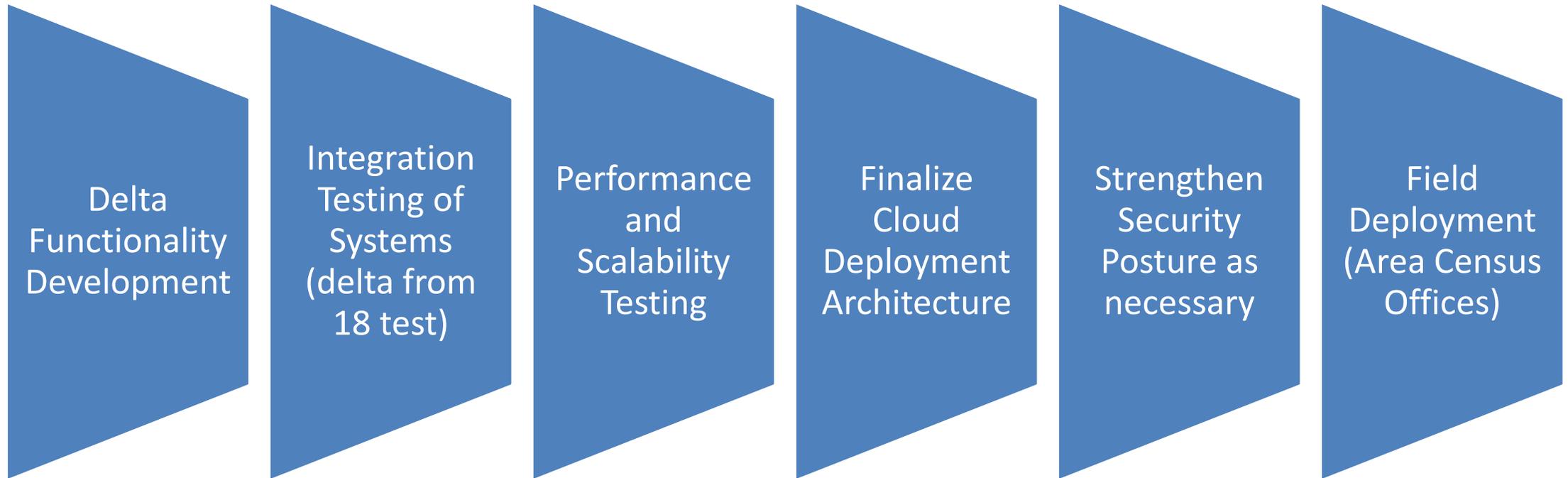
Input from System Teams, Field, OIS, SE&I, Contractors, etc.

Converted 4 Releases into 16 Operational Deliveries

Includes an operational delivery each for Island Areas and Post Enumeration Survey

2020 Census Systems Readiness

Systems Readiness for 2020 Census— Remaining Key Work



QUESTIONS?

Back Up Slides

2020 Census Systems Readiness

2020 Census Systems List

	System	Description
1	2020 Website	2020 website provides a public web interface and allows partners to publish content.
2	ATAC (Automated Tracking and Control)	ATAC provides customer, employee, and workflow management. It also provides outbound call tracking for Geographic Partnership Programs and material tracking and check-in.
3	BARCA (Block Assessment, Research, and Classification Application)	BARCA is an interactive review tool, which is designed to assist an analyst in assessing present, past, and future housing units for a set of geographic work units. It is used for in-office address canvassing.
4	CAES (Concurrent Analysis and Estimation System)	CAES is a high speed processing environment used to make fast decisions during the data collection phase of the Census.
5	CaRDS (Control and Response Data System)	CaRDS provides sample design and universe determination.
6	CBS (Commerce Business System)	CBS is an electronic financial tracking and approval system. CBS collects and reports labor hours and costs for activities that the National Processing Center (NPC) performs.
7	CDL (Census Data Lake)	CDL serves as the repository for paradata and response data. It is built on a distributed, scalable platform to support data ingest, storage, and access for reporting and analytics applications.
8	CEDESCI (Center for Enterprise Dissemination Services and Consumer Innovation)	CEDESCI is an enterprise dissemination platform with search capability and access to surveys and censuses data.
9	CEM (Customer Experience Management)	CEM is an enterprise platform, which is used to provide dashboards providing insight into customer-focused performance metrics.
10	CENDOCS (Census Document System)	CENDOCS is a web-based system for requesting forms design services, publications and graphics services, and printing services which includes CD-ROM replication.
11	Centurion	Centurion provides for the upload of GQ eResponse data, LUCA address updates, and FACO data.

2020 Census Systems Readiness

2020 Census Systems List

	System	Description
12	CHEC (Census Hiring and Employment Check System)	CHEC is an administrative system that automates clearance processing of all personnel at the Census Bureau Headquarters, the Bureau of Economic Analysis (BEA), the Regional Offices (ROs), the National Processing Center (NPC), and Computer Assisted Telephone Interview (CATI) sites. This system supports fingerprint processing with the Federal Bureau of Investigation (FBI), the Office of Personnel Management (OPM), the Department of Homeland Security (DHS), the Office of Management and Budget (OMB), and the Department of Commerce (DOC).
13	CHRIS (Census Human Resources Information System)	CHRIS is a web-based personal information tool which provides personnel and payroll information on desktops. It creates a contact file for the Emergency Notification System (ENS).
14	CIRA (Census Image Retrieval Application)	CIRA stores decennial census images as well as raw and edited data. It provides a user interface for reviewing the images and data and is used for age match research at NPC.
15	CQA (Census Questionnaire Assistance)	CQA is a system that collects response data through inbound respondent-initiated calls, assists respondents with completing their questionnaires, including capturing their responses over the phone, and answering questions. CQA also provides outbound calling and data capture for reconciliation of response inconsistencies and follow-up QC operations.
16	CRM (Customer Relationship Management)	CRM is a suite of applications that provide the management of partnership activities, and case management for customer service.
17	DAPPS (Decennial Applicant, Personnel and Payroll Systems)	DAPPS is the system of record for the C-SHaRPS system of systems. It supports selection, hiring, personnel actions, time and expense processing, and payroll administration for temporary Census Bureau employees.
18	Desktop Services	Desktop Services is a set of office automation applications and tools for field office staff and remote workers.
19	DMP (Data Management Platform)	DMP provides centralized data analytics service to support decision-making for the Census advertising campaign.
20	DRPS (Decennial Response Processing System)	DRPS provides autocoding, clerical coding, data editing, and imputation for the post-data-collection response processing.
21	DPACS (Decennial Physical Access Control System)	DPACS maintains information relating to physical access control to facilities.

2020 Census Systems Readiness

2020 Census Systems List

	System	Description
22	DSC (Decennial Service Center)	DSC is the help desk service for field representatives.
23	ECaSE ENUM (Enterprise Censuses and Surveys Enabling Platform – Enumeration)	ECaSE Enum supports field enumeration, provides the employee availability, and time & expense capabilities.
24	ECaSE FLD OCS (Enterprise Censuses and Surveys Enabling Platform – Field Operational Control System)	ECaSE FLD OCS manages field assignments and leverages the Optimizer for routing field staff to and between assignments.
25	ECaSE ISR (Enterprise Censuses and Surveys Enabling Platform – Internet Self-Response)	ECaSE ISR supports self-response data collection via the Internet. It also supports data collection by call center agents.
26	ECaSE OCS (Enterprise Censuses and Surveys Enabling Platform – Operational Control System)	ECaSE OCS manages the data collection case history for all enumeration operations and maintains operational workloads as data collection proceeds.
27	FDS (Fraud Detection System)	FDS identifies fraudulent cases of self-response using analytical models.
28	Geospatial Services	Geospatial Services provide mapping and imagery services.
29	GUPS (Geographic Update Partnership Software)	GUPS allows partners to provide geographic data updates.
30	iCADE (Integrated Computer Assisted Data Entry)	iCADE captures and tracks respondent information from scanned paper questionnaires. The iCADE system processes digital images of respondent questionnaires through three functions. Optical Mark Recognition (OMR) automatically detects and captures checkmark responses. Optical Character Recognition (OCR) automatically captures the presence of pre-selected numeric answer fields. Key From Image (KFI) directs keyers to all pre-identified, non-OCR write-in answer zones for keying hand-written data.
31	IDMS (Identity Management System)	IDMS provides enterprise authentication, authorization, identity, and access management.

2020 Census Systems Readiness

2020 Census Systems List

	System	Description
32	ILMS (Integrated Logistics Management System)	ILMS is used to manage logistics and resource planning.
33	IPTS (Intelligent Postal Tracking System)	IPTS is a mail tracking system that traces individual mail pieces through the USPS mailstream.
34	LiMA (Listing and Mapping Application)	LiMA provides address and map feature collection in support of surveys and censuses.
35	MaCS (Matching and Coding Software)	MaCS provides interactive clerical matching and coding. This application supports Non-ID processing.
36	MAF/TIGER (Master Address File/Topologically Integrated Geographic Encoding and Referencing Database)	MAF/TIGER is a repository of spatial and address data and is used to provide spatial and address products and services in support of survey and census operations.
37	MCM (Mobile Case Management)	MCM provides mobile device-level survey case management.
38	MOJO Optimizer/Modeling	MOJO Optimizer/Modeling is a route optimizer for field case assignments.
39	MOJO Recruiting Dashboard	The MOJO Recruiting Dashboard provides a dashboard that supports recruiting activities.
40	NPC Printing (Printing at the National Processing Center)	NPC Printing provides printing services.
41	OneForm Designer Plus	OneForm Designer Plus is a tool used to create paper forms including decennial questionnaires, letters, envelopes, notice of visit, language guides, and other decennial field and public materials.
42	PEARSIS (Production Environment for Administrative Records, Staging, Integration, and Storage)	PEARSIS manages administrative records and services associated with these records.

2020 Census Systems Readiness

2020 Census Systems List

	System	Description
43	PES Clerical Match and Map Update (Post-Enumeration Survey - Clerical Matching System and Map Update)	PES Clerical Match and Map Update provides clerical address and person matching and residential unit location updates to support the Coverage Measurement operation.
44	PES Imputation and Estimation (Post-Enumeration Survey - Imputation and Estimation System)	PES Imputation and Estimation provides coding, imputation of responses, and estimation of coverage for the Coverage Measurement operation.
45	PES PCS (Post-Enumeration Survey - Processing and Control System)	PES PCS provides sampling, automated matching, and workload control for the Coverage Measurement operation.
46	R&A (Recruiting and Assessment)	R&A provides online job application capability for temporary positions, online training, and applicant pre-selection assessments.
47	RTNP (Real Time Non-ID Processing)	RTNP standardizes, matches, and geocodes addresses in real-time.
48	SMArCS (Sampling, Matching, Reviewing, and Coding System)	SMArCS applies quality control algorithms to the field address canvassing and enumeration operations.
49	SOA (Service Oriented Architecture)	SOA, along with the enterprise service bus, is a web service infrastructure that facilitates data transport, communication, and integration of systems.
50	Tabulation (Decennial Tabulation System)	Tabulation produces tabulated response data for redistricting and other purposes.
51	UTS (Unified Tracking System)	UTS provides operational and cost & progress reports.
52	WebTQA (Web Telephone Questionnaire Assistance)	WebTQA provides telephone assistance for Geographic Partnership Programs.

2020 Census-Decennial Census Programs, Operations and Schedule Management

James B. Treat

Assistant Director for Decennial Programs



2020 Census-Schedule Management Process

Jacqueline Eanes
Decennial Census Management Division



2020 Census: Schedule Management Update

Agenda

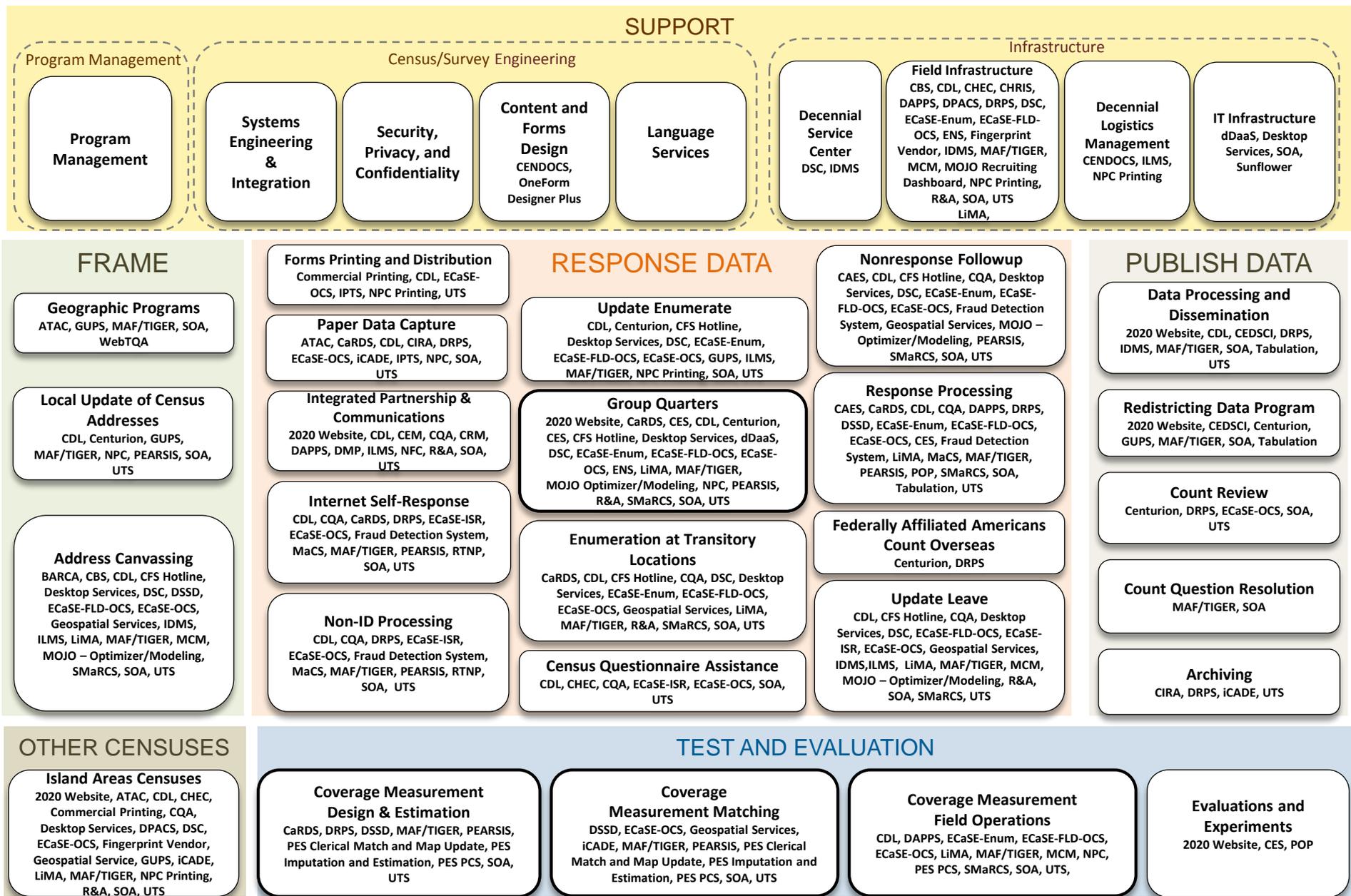
- Complexity of the 2020 Census
- Introduction of the Integrated Master Schedule (IMS)
- Schedule Management Roles and Responsibilities
- Schedule Management Process
- Schedule Management Reports
- Update on the IMS Status
- Questions

2020 Census: Schedule Management Update

Complexity of the 2020 Census

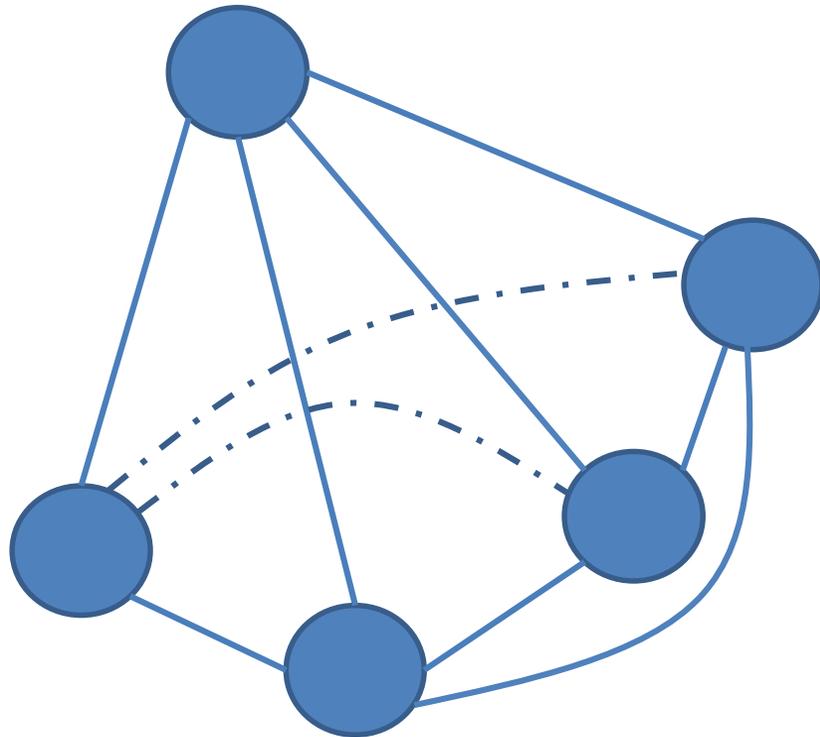
- It is a program consisting of multiple projects that rely on facilities, people, materials, systems, data, procedures, and contracts
- Large transactional system that
 - Integrates 35 operations
 - Utilizes 52 systems released at different points in time
 - Large volume
 - Spans multiple years
 - Unforgivable deadlines (March 31, 2017 & 2018; December 31, 2020; and March 31, 2021)
 - High level of activity during a short period of time (peak operations)

With the goal to count everyone once, only once, and in the right place



2020 Census: Schedule Management Update

Complexity of the 2020 Census



Example:

In a five-operation program, there are a maximum of 10 integration points

$$(5 \times 4) / 2 = 10$$

2020 Census:

In a 35-operation program with 52 supporting systems, there are a maximum of 3,741 integration points

$$(87 \times 86) / 2 = 3,741$$

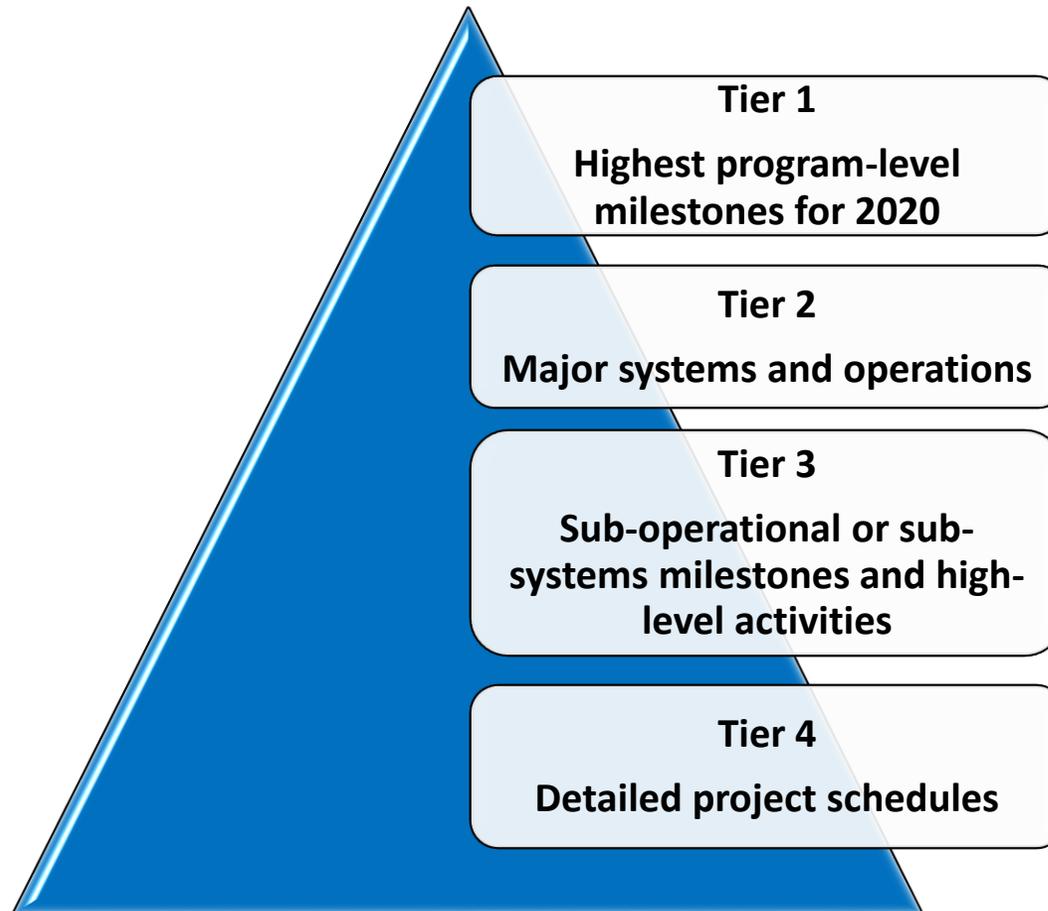
2020 Census: Schedule Management Update

What is the Integrated Master Schedule (IMS)?

- The IMS is a complex, detailed, interdependent program schedule consisting of:
 - 87 projects
 - 24,664 activities
 - 47,155 relationships
- It is multi-tiered to support integration of all projects within and across the Decennial program and allows for control at the program and project levels
- Schedule management tool is Oracle Primavera

2020 Census: Schedule Management Update

What is the Integrated Master Schedule (IMS) Structure



2020 Census: Schedule Management Update

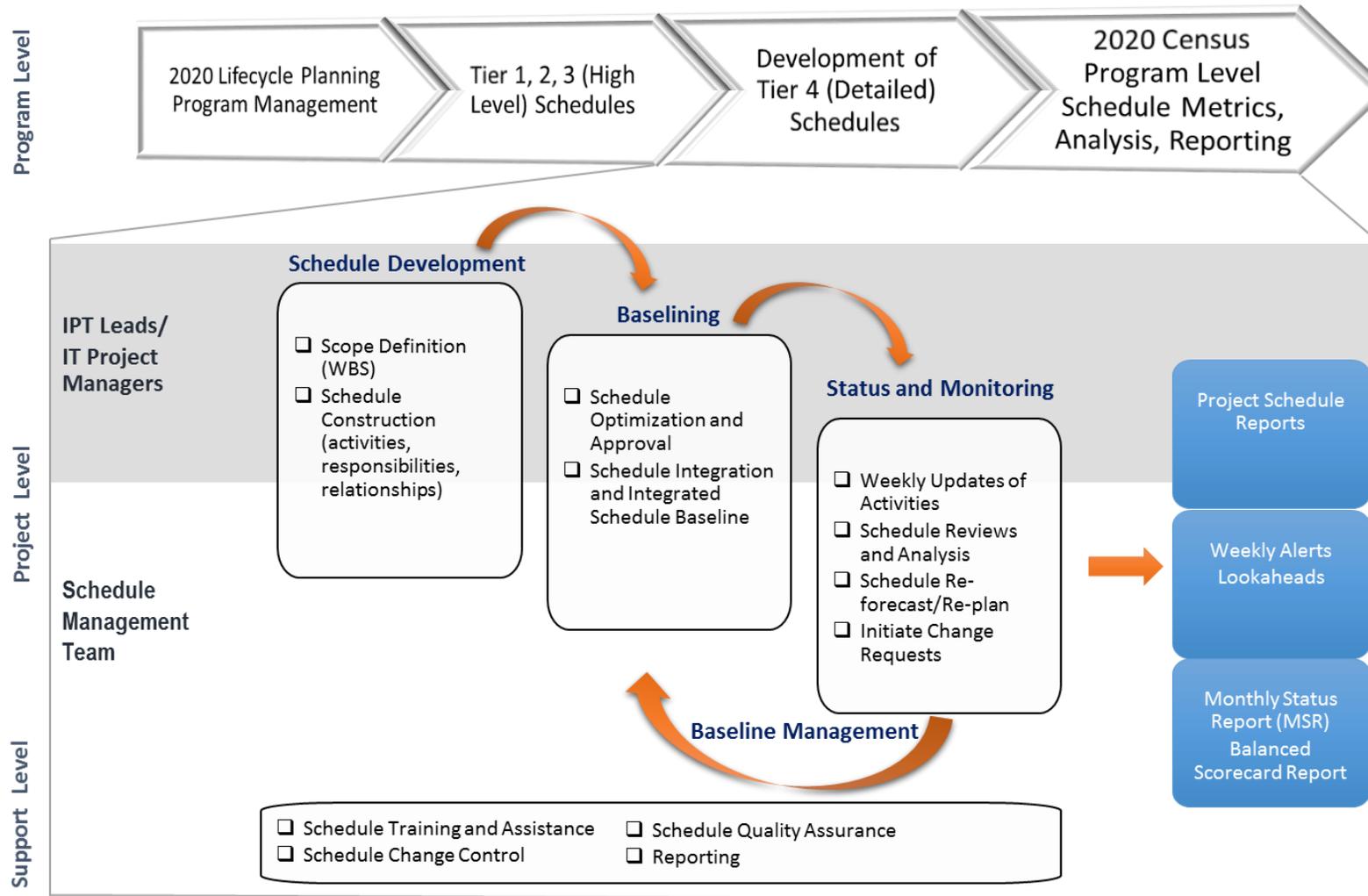
Schedule Management Roles and Responsibilities

The Decennial Census Management Division's (DCMD) Scheduling Staff: Responsible for developing, managing, and operating the 2020 Census Schedule System. This includes:

- Oversee the administration of the schedule
- Ensure the schedule design is aligned with the program design
- Facilitate the development of operation and system schedules
- Ensure project schedules adhere to best practices and standards, as defined in the Schedule Management Plan
- Leverage Government Accountability Office (GAO) Best Practices
- Ensure the schedule is in alignment with the Defense Contract Management Agency (DCMA) 14-point assessment
- Create and maintain the schedule baseline
- Implement changes to the baseline through the program change management process
- Identify schedule variance
- Work with program managers to resolve issues
- Produce standard and adhoc schedule reports
- Conduct periodic assessments of the schedule, e.g., schedule risk analysis
- Report program status to Census Bureau leadership

2020 Census: Schedule Management Update

Schedule Management Process



2020 Census: Schedule Management Update

Schedule Management Process

GAO Best Practices

- 100% scope identified and included in IMS
- All activities are logically linked
- All activities have accurate and reasonable duration
- IMS can be traced horizontally and vertically
- Critical path can be extracted and validated
- Total float is within tolerance
- Schedule Risk Analysis is conducted regularly
- Actual progress is applied weekly
- Baseline is maintained and archived

2020 Census: Schedule Management Update

Schedule Management Process

Defense Contract Management Agency (DCMA) 14 Point Assessment

- Purpose: Used as a tool to ensure quality schedules are created and maintained
- Expectation: All Decennial schedules should meet the DCMA 14 Point Assessment threshold values
 - Schedule Management Staff use this assessment as part of their quality checks
 - If a schedule falls outside a threshold, they work with the schedule owners to take corrective actions that bring the schedule back into alignment
 - Informs the schedule development and statusing guidelines

2020 Census: Schedule Management Update

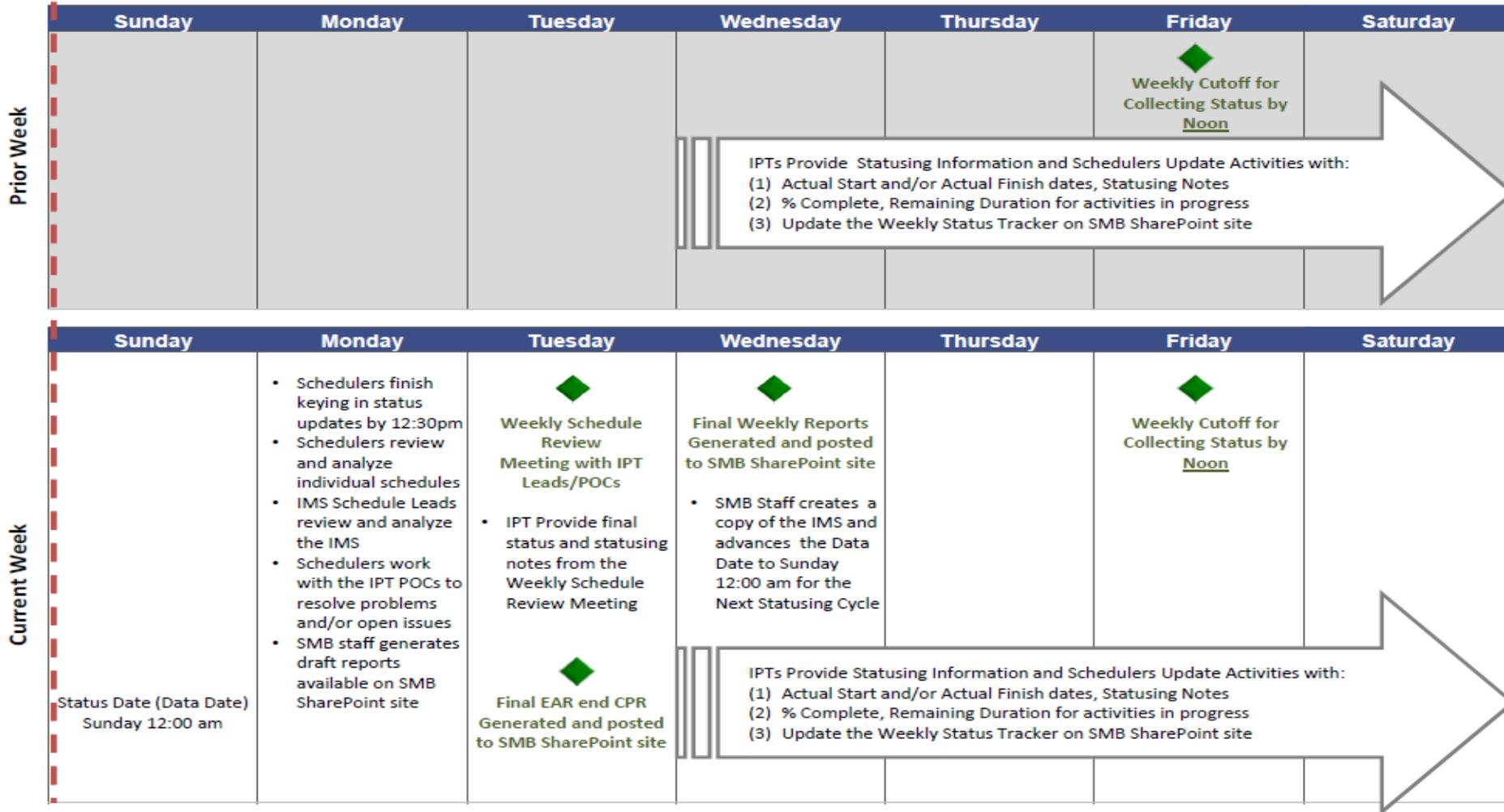
Schedule Management Roles and Responsibilities

- DCMD Management: Facilitate coordination and integration among the schedule stakeholders and ensure cooperation with the schedule management process.
- Portfolio Management Governance Board (PMGB): Team consisting of representatives from the Decennial Directorate Leadership Team and supporting area assistant directors and division chiefs, responsible for reviewing and approving 2020 Census projects deliverables.
- **Project Managers**: Responsible for participating in the schedule development and management process and using the schedules to manage their work. This includes:
 - Development and review of their schedule
 - Integration of their schedule with other project and system schedules
 - Ownership of their schedule content, e.g. scope, durations, logic, etc.
 - Weekly statusing of their schedule
 - Weekly review of their schedule

* Project Managers are the Integrated Project Team (IPT) Leads or IT Project Managers

2020 Census: Schedule Management Update

Schedule Management Process-Schedule Status Cycle



2020 Census: Schedule Management Update

Schedule Management Process-Statusing Guidelines

Current Status	Steps
Start Milestone Started	✓ Enter Actual Start date (Start Milestones only have Start date)
Finish Milestone Completed	✓ Enter Actual Finish date (Finish Milestones only have Finish date)
Activity Completed	<ul style="list-style-type: none"> ✓ Enter Actual Start date (if activity started since last update) ✓ Enter Actual Finish date (if activity finished since last update)
Activity In progress	<ul style="list-style-type: none"> ✓ Enter Actual Start date (if activity started since last update) ✓ Enter/update % Complete (at minimum 25%, 50%, or 75%) ✓ Enter/update Remaining Duration or Expected Finish date ✓ Enter/Update Statusing Notes if activity is delayed to explain reason for delay
Activity or Milestone Not started	✓ If activity/milestone should have started/finished and is delayed then enter/update Statusing Notes to explain reason for delay

2020 Census: Schedule Management Update

Standard Schedule Reports

- **Should Have Started/Should Have Finished Report** – Status of a list of activities that should have started and/or finished and have not started or finished
- **30, 60 & 90 Day Look Ahead Reports** – Status of a list of activities that should start and/or finish in the next 30, 60, and 90 days
- **Executive Alert Report (EAR)** – Status of a list of activities that represent gates of progress that must start and finish on time in order to deliver the apportionment and redistricting data products

2020 Census: Schedule Management Update

Integrated Master Schedule Development, Integration, and Review

- 2020 Census Execution detailed schedule development: July - December 2017
- Baselined the schedule: December 14, 2017
- Weekly statusing and monitoring of baselined schedule: December 15, 2017
- Working with Operations, Systems, and Testing Project Managers to incorporate the converted systems releases into the baselined IMS: Target finish date is October 31, 2018

2020 Census-Risk Management Process

Deidre Hicks
Decennial Census Management Division



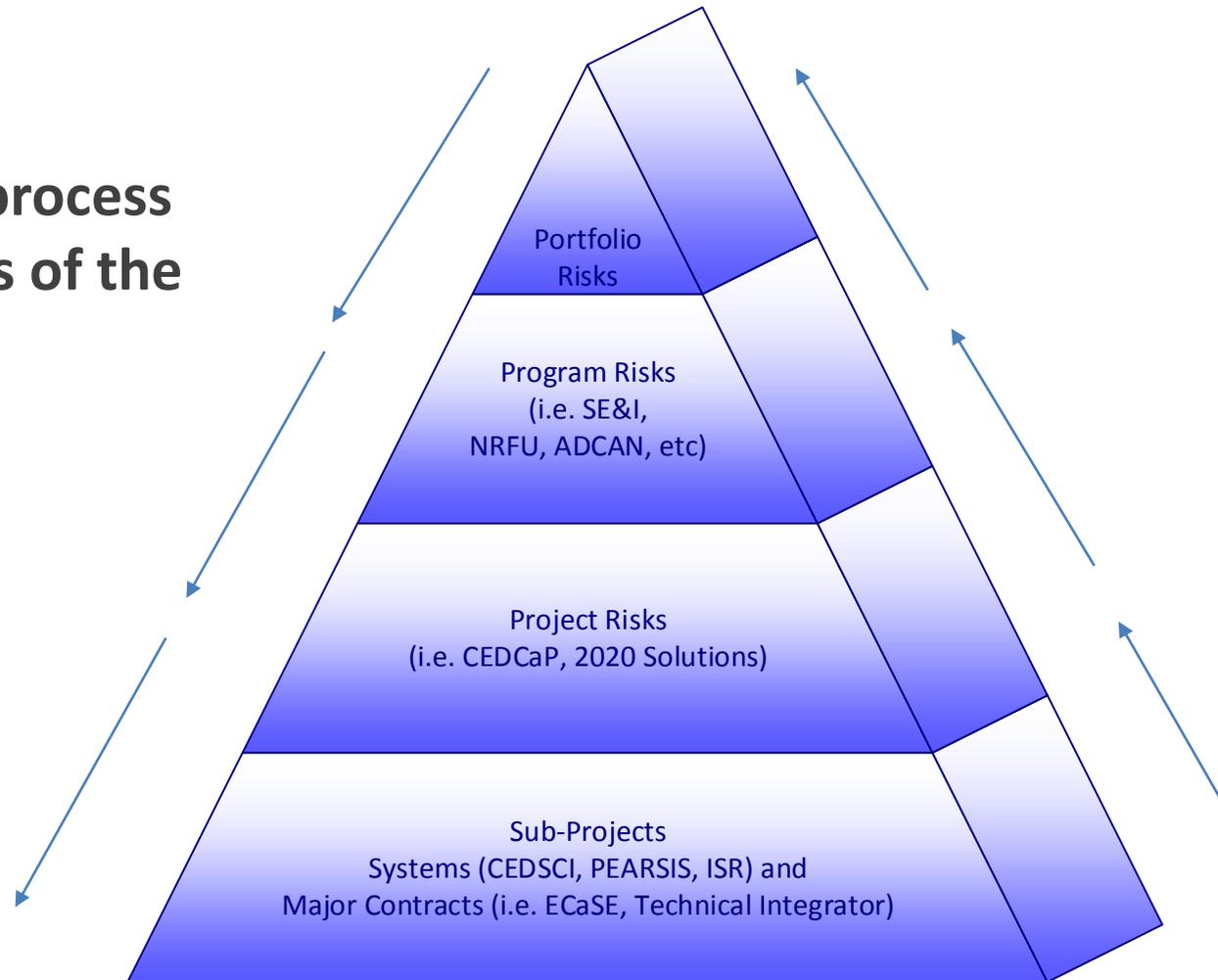
2020 Census: Risk Management Process

Agenda

- Risk Management Structure and Process
- Risk Management Governance and Reporting
- Review of Portfolio Level Red Risks
- Program and Project Level Risk Summary

2020 Census: Risk Management Structure and Process

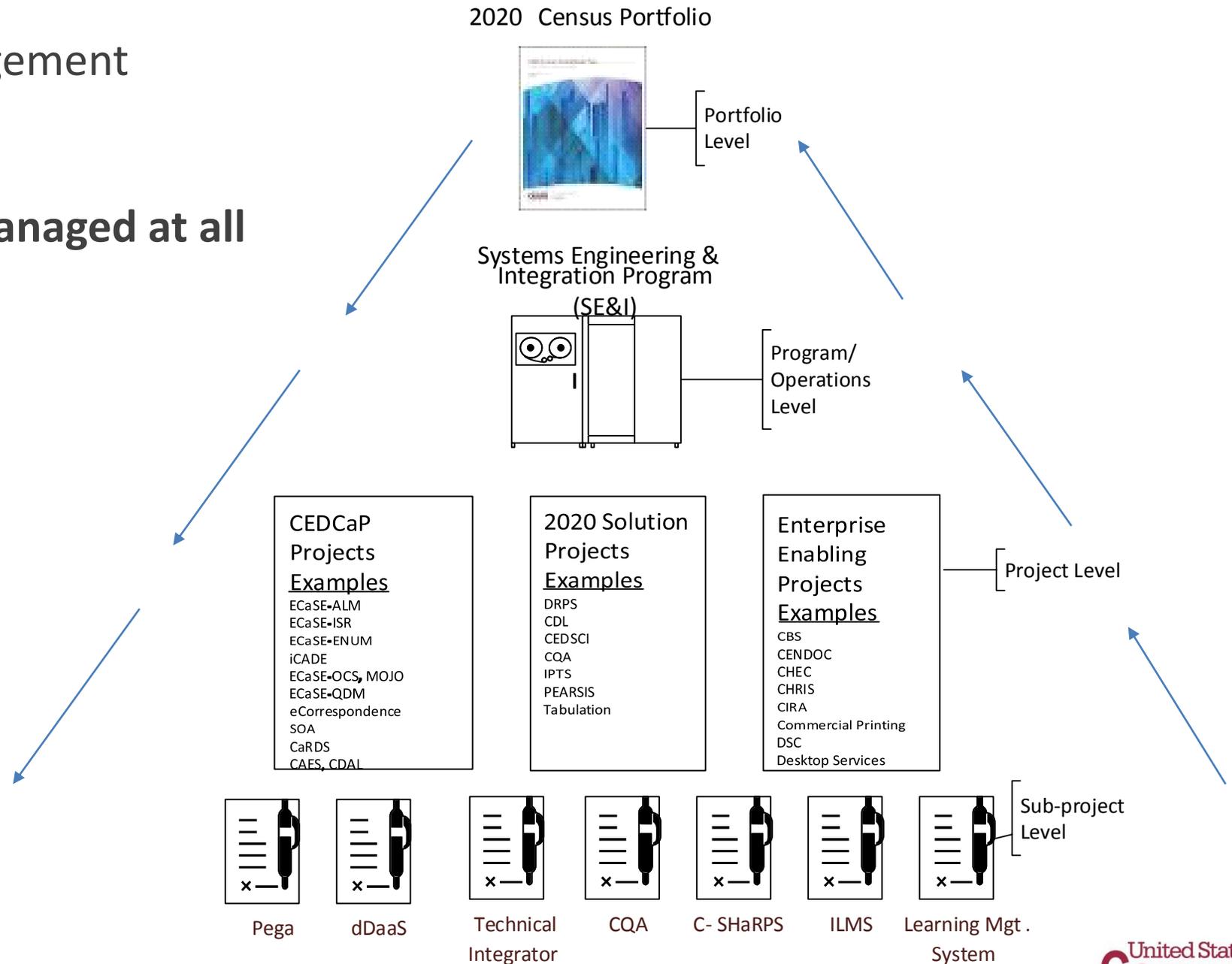
The Risk Management process is conducted at all levels of the 2020 Census Portfolio.



2020 Census Portfolio Risk Management Process

2020 Census: Risk Management Structure and Process

Risks are identified and managed at all levels of the 2020 Census.



2020 Census

Portfolio Management-Structure and Process

Portfolio risks span the 2020 Census life cycle and could jeopardize the ability to achieve 2020 Census goals and objectives.

- Have the potential to be realized more than once during the life cycle.
- Span several years with many potential risk events over that period.
- Risks can spin-off multiple issues.
- May elevate from the program, project and sub-project level because of the potential to impact portfolio goals.

2020 Census

Risk Management-Governance

The 2020 Census Risk Review Board is the overall governing body presiding over the 2020 Census Portfolio, program and project level risks management processes.



2020 Census

Risk Management-Reporting

Dasher Report

- Monthly report to Census Bureau leadership and Commerce Managers including the Associate Director for Decennial Census Programs, Director, Deputy Director, Department of Commerce.
- Top Risks (Red and Yellow), Portfolio Risk Inventory, Mitigation Treatment Plans.

Capital Planning Investment Control (CPIC) Reporting

- Monthly delivery to the Department of Commerce and OMB.
- Portfolio Risk Register, full information on all Red risks, and a Quad Chart with Top Risks.

2020 Portfolio Management Governance Board (PMGB)

- Quarterly review of Red risks. Escalated risks brought to PMGB as necessary.

2020 Census

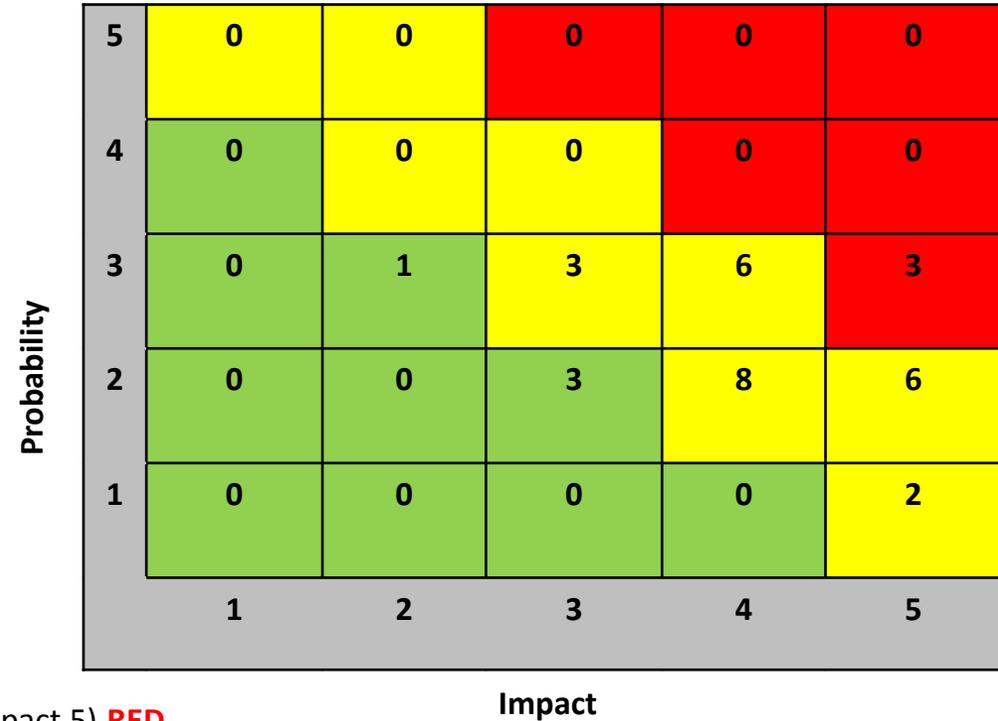
Risk Management-Portfolio Risk Management Rating Scales

Risk Impact Category	A Risk's Potential to Impact the Portfolio's Ability to:
Cost	Stay within its overall funding or the funding of an individual major component.
Schedule	Achieve major and highly visible schedule milestones, or meet the overall portfolio schedule.
Technical	Meet its operational and production performance requirements.
Customer Expectations	Meet the expectations of and commitments to customers and stakeholders.
Public Trust	Meet the expectations of and requirements for public trust in the Census Bureau or damage the public reputation of the Census Bureau.

2020 Census

Portfolio Level Top Risks

Quadrant	Total Risks	%
RED	3	9.4%
YELLOW	25	78.1%
GREEN	4	12.5%
TOTAL	32	100%



- Public Perception of Ability to Safeguard Response Data (Probability 3, Impact 5) **RED**
- Cybersecurity Incidents (Probability 3, Impact 5) **RED**
- Testing of Performance Measurement Reports (Probability 3, Impact 5) **RED**
- Duplicate and Missing Living Quarters <New> **Yellow**
- Within-Household Person Overcoverage and Undercoverage <New> **Yellow**

Data Date: 7/27/18

QUESTIONS?