

Overview of Operations and Challenges in the 2020 Census

Presentation to the National Academy of Sciences, Engineering, and Medicine's Panel to Evaluate the Quality of the 2020 Census

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

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Approach to Conducting a Successful Census



- **Complete and accurate count—**
The goal of the 2020 Census is to count everyone once, only once, and in the right place.
- **Safe and secure—**Incorporate industry and federal IT best practices for encrypting data in transmission and at rest.
- **Easy and convenient—**Respond any way you want, online, by mail, or over the phone.

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A Complete and Accurate Count of the Population and Housing

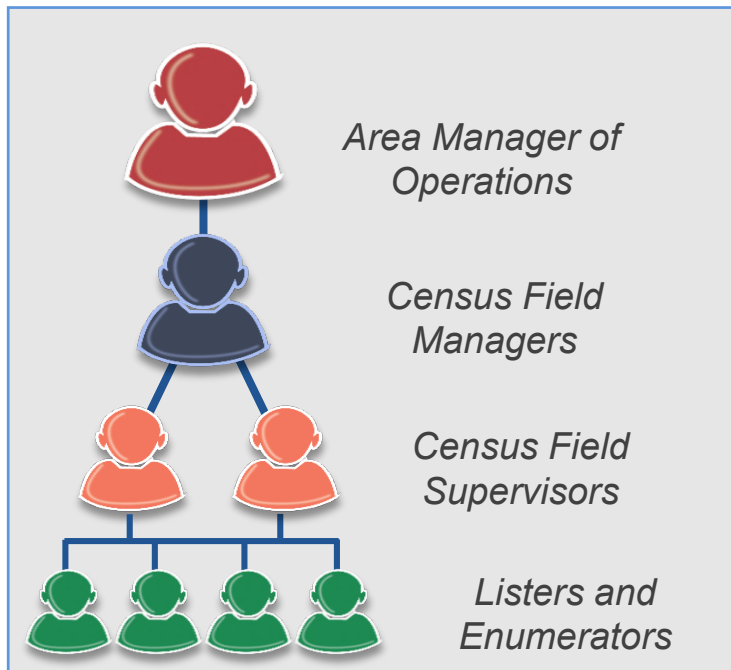


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Reengineering Field Operations

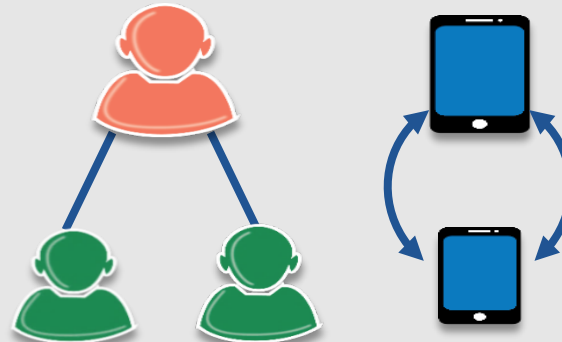
Used technology to more efficiently and effectively manage 2020 Census fieldwork

Streamlined Office and Staffing Structure



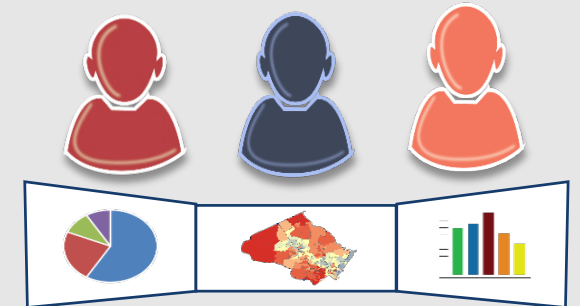
Increased use of Technology

- Automated and optimized work assignments
- Automated recruiting, training, payroll and expense reporting
- Reduced paper and manual processing



Increased Management and Staff Productivity

- Increased visibility into case status for improved workforce management
- Redesigned quality assurance operations
- Improved communications



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Key Milestones/Activities – Progress Through March 17, 2020

Milestones/Activities	Dates
Begin 2020 Census Program	November 18, 2011
Begin Local Update of Census Addresses (LUCA) Program	January 2017
Deliver 2020 Census Topics to Congress	March 28, 2017
Deliver 2020 Census Questions to Congress	By March 31, 2018
Open Regional Census Centers	By April 1, 2018
Go-Live with Online Job Application and Website	September 4, 2018
Open Area Census Offices	January 7, 2019 – September 23, 2019
Conduct In-Field Address Canvassing	August 18, 2019 – October 11, 2019
Launch Advertising Campaign	November 1, 2019
Conduct Remote Alaska	January 21, 2020 – April 30, 2020
Conduct Group Quarters – Advance Contact	February 3, 2020 – March 6, 2020
Conduct Enumeration at Transitory Locations – Advance Contact	February 24, 2020 – March 21, 2020
Conduct Self-Response	March 12, 2020 – July 31, 2020
Conduct Update Leave	March 15, 2020 – April 17, 2020
Conduct Update Enumerate	March 16, 2020 – April 30, 2020
Conduct Group Quarters – Service Based Enumeration	March 30, 2020 – April 1, 2020
2020 Census Day	April 1, 2020
Conduct Group Quarters Enumeration	April 2, 2020 – June 5, 2020
Conduct Coverage Improvement	April 7, 2020 – July 31, 2020
Conduct Enumeration at Transitory Locations	April 9, 2020 – May 4, 2020
Conduct Early Nonresponse Followup	April 9, 2020 – May 13, 2020
Conduct Nonresponse Followup	May 13, 2020 – July 31, 2020
Begin Post Enumeration Processing Activities	August 1, 2020
Deliver Apportionment Counts to the President	By December 31, 2020
Complete Delivery of Redistricting Counts to the States	By March 31, 2021
Complete 2020 Census Program	September 29, 2023

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In-Office Process: Developing and Maintaining an Accurate Address List

US Postal Service's Delivery Sequence File (DSF)

5.3 million new residential addresses added to the Master Address File (MAF) since 2010.

2.3 million residential addresses that were new to the DSF matched addresses already in the MAF.

Tribal, state, and local government address lists provided through the Geographic Support System Program

106.7 million addresses acquired between 2012 and 2018.

106.2 million (99.5 percent) matched addresses already in the MAF.

Geospatial locations improved and/or corrected for 75.1 million addresses.

Ungeocoded Resolution Project

810,899 addresses (72 percent of addresses reviewed) that previously were not assigned to a census block have been geocoded since 2017.

Local Update of Census Addresses (LUCA) Program

22 million addresses received from 8,395 entities.

17.87 million (81.2 percent) matched to the MAF.

3.46 million unmatched addresses.

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In-Field Address Canvassing

- First major field operation completed on time – October 11, 2019
- Used imagery to detect housing change or stability over time throughout the United States and Puerto Rico and to compare the number of housing units on the ground to the number in the Census Bureau's Master Address File.
- Managing as much of the review and validation of the address list as possible in the office allowed resources to be focused on areas in which fieldwork is necessary to assure a complete and accurate address list.
- Deployed Listers nationwide equipped with laptops to canvass over 50 million addresses.
- Productivity exceed plan.
 - Production: 31% more efficient than plan.
 - Quality Control: 69% more efficient than plan.
- Deployed 27 IT systems for first three operations, which are vital to peak operations.
- Systems scaled and handled required loads.
- Implemented Rapid Response (Hurricane Dorian) and continued operation.

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Summary of Self-Response

Original Dates: March 12 – July 31, 2020

Adjusted Dates: March 12 – October 15, 2020

- **2020 Census addresses resolved by Self-Response*: 65.3%**
 - Exceeded 2010 Census addresses resolved by Self-Response** of 61.1%
 - Addresses resolved by Self-Response by Mode:
 - **Internet: 79.7%**
 - **Paper: 18.1%**
 - **Phone: 2.1%**
- 6 States with a percentage of addresses resolved by Self-Response at or above 70% vs 0 States in 2010
- 39 States (including DC) with a percentage of addresses resolved by Self-Response at or above 60% vs 27 States (including DC) in 2010
- All 50 States plus DC met or exceeded the percentage of addresses resolved by Self-Response compared to 2010

*Final 2020 Operational Self-Response Rate: 67.0% of people invited to self-respond

**Final 2010 Operational Self-Response Rate: 66.5% of people invited to self-respond

2020 Operational Adjustments due to External Factors

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External Factors Impacting Progress

- COVID-19 – March 18, 2020
- Civil Unrest – May 25, 2020
- Tropical Storm Marco – landfall on August 24, 2020
- Hurricane Laura – landfall on August 26, 2020
- California, Oregon and Washington Fires and Air Quality – September 7, 2020
- Hurricane Sally – landfall September 16, 2020
- Tropical Storm Beta – landfall on September 21, 2020
- Legal challenges – Ongoing

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Key Decision Points for Activating In-Person Interviewing

1. Safe to Work

(Determined Nationally)

OBJECTIVE: We will only conduct in-person interviews in locations where we can minimize risk to our employees and the American public.



CRITERIA:

- States satisfy the federal gating criteria a second time.
- Data supports ongoing cycle of 14-day downward trends (similar to criteria used to determine Phase 2).
- Governor declares the State's entry into Phase 2 (or similar declaration).

2. Public Response

(Determined Regionally at the ACO Level, with Nationally-provided data)

OBJECTIVE: Identify areas where the effect of the virus does not substantially undermine public response to in-person interviewing.



CRITERIA:

- Are the patterns of "approved" public behavior consistent with in-person contact? (e.g., barber shops open, restrictions on public gatherings relaxed, other personal contact business open)
- Are there levels of public engagement consistent with an open response to cooperate?
- Evidence from other organizations/agencies
 - Delivery services, Restaurants/Theaters, Schools
- Are there ongoing restrictions regarding public engagement which conflict with conducting personal visits?

3. Internal Readiness

(Determined Regionally at the ACO Level)

OBJECTIVE: Ensure we are ready to conduct in-person interviewing in a way that minimizes risk to the public and our employees.



CRITERIA:

- Are workers available to conduct the work?
 - Do we have positive indication they are available for work?
 - Have they completed the required awareness training and using Personal Protective Equipment (PPE)?
- Is the appropriate PPE in place? (Masks/face coverings must be available, hand sanitizer & gloves available as appropriate)
- Do we have data collection equipment staged and ready for use?

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Operational Timelines: Original and Pandemic-Adjusted

Activity / Operation	Original Dates	Final Dates
Self-Response Phase	March 12 – July 31	March 12 – October 15
Update Leave (Stateside)	March 15 – April 17	Phased re-opening occurred between May 4 and June 12
Service Based Enumeration	March 30 – April 1	September 22 – 24
Targeted Non-Sheltered Outdoor Locations	March 31 – April 1	September 23 – 24
Group Quarters Enumeration	April 2 – June 5	April 2 – September 3
Enumeration of Transitory Locations	April 9 – May 4	September 3 – 28
Nonresponse Followup	May 13 – July 31	August 9 – October 15
Delivery of Apportionment Data	Statutory Deadline: December 31, 2020	April 30, 2021
Delivery Redistricting Data	Statutory Deadline: March 30, 2021	September 30, 2021*

*Legacy format summary redistricting data file will be delivered August 16, 2021

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Service-Based Enumeration (SBE)

Background: The SBE operation is conducted at service-based locations and targeted non-sheltered outdoor locations (TNSOLs) to provide an opportunity for people experiencing homelessness to be included in the census. Prior to operational adjustments made in lieu of COVID-19, SBE was originally scheduled to be conducted March 30 – April 1.

Consulted With Major Stakeholders: In late May/early June we consulted with 67 organizations to assist the Census Bureau in determining the date to conduct SBE/TNSOL. Determining an optimal date to conduct SBE took into consideration the need to conduct a thorough and accurate enumeration, while also understanding the needs of our external partners, which are crucial during SBE.

- 34 direct service, civil rights and other national partners and stakeholders who advocate on behalf of persons experiencing homelessness
- 30 City, County, and State governments
- 3 Federal Offices

Feedback from Stakeholders: There was a consistent and a nearly unanimous recommendation to conduct SBE/TNSOL operations in the Fall time frame. Reasons cited for this include:

- Seasonality is a big concern for homeless service providers. People move around based on the weather. Late September more closely mirrors where people would have been in March. This is probably the single largest concern and influencer in their recommendation.
- Summer is more difficult to count people experiencing homelessness, as fewer people use shelters and people are much more spread out.
- Impacts from the coronavirus are significant right now in the homeless community. Stakeholders felt enumerating in late July would be too close to the current outbreak. They haven't "left" the current outbreak and worries about a possible second wave are too unknown.
- Service providers are burned out due to the pandemic. Getting ready to conduct SBE in July would be tough - end of September gives them time to regroup and fully prepare.

Operational Decision: Based on the feedback from our stakeholders, input from Census experts, and consultation with operational team leads, September 22 – 24 was selected to conduct SBE and TNSOL.

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Modifications to Nonresponse Followup (NRFU)

1. Designed and implemented a Soft Launch

- Allowed us to start in a controlled and orderly way that catches and solves possible problems early, especially in light of any untested changes required for our response to COVID-19.

2. Field training was modified to a virtual training program for more than 500,000 employees

- Provided two hours of in-person enumerator training during which enumerators also received equipment. The original plan had been for two days of in-person training.

3. Extraordinary efforts were made to onboard and retain field staff

- Extended recruitment period five months, through September 2020.
- Employed over 500,000 temporary staff during the Census, with nearly 300,000 people working during our peak week in early August 2020.
- Offered a monetary award for achieving certain production levels.

4. Travel enumeration teams were deployed to lower performing / weather impacted areas

- Offered a monetary award to enumerators who would travel to help complete NRFU in areas that were experiencing production shortfalls.
- Deployed over 26,000 enumerators to other areas or regions during Nonresponse Followup.

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Nonresponse Followup Summary

- Operational Dates: August 9 – October 15, 2020
- Successful implementation of a rolling soft launch that began July 16, 2020
- **Among those that were identified as occupied housing units in Nonresponse Followup:**
 - **55.5% enumerated with a household member**
 - **26.1% resolved with a proxy respondent**
 - **This is comparable to the 2010 Census, in which 24.7% of occupied housing units in Nonresponse Followup were enumerated via proxy**
 - **18.4% enumerated using high-quality administrative records**
- **Among those that were identified as vacant housing units in Nonresponse Followup:**
 - **85.5% resolved with a proxy respondent**
 - **14.5% enumerated using high-quality administrative records**
- **Among those that were identified as deleted housing units in Nonresponse Followup:**
 - **96.4% resolved with a proxy respondent**
 - **3.6% enumerated using high-quality administrative records**

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Summary of Other Operations

- **Remote Alaska:** Almost 34,000 enumerations completed
- **Update Leave:** Paper questionnaires and invitations to self-respond delivered to over 6.8 million addresses
- **Group Quarters Enumeration:** Over 215,000 Group Quarters enumerated
- **Service Based Enumeration:** Over 53,000 Service-based locations enumerated including almost 37,000 Targeted Non-sheltered Outdoor Locations
- **Recruiting:**
 - Over 3.9 million applicant profiles created in the Recruiting and Assessment System.
 - Almost 3.1 million applicants available for job selection
- **Partnership:**
 - 1,068 National Participating Organizations
 - Over 398,000 Community Partners
 - Over 8,600 Local Complete Count Committees
 - Over 486,000 completed partnership events

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Post Processing Key Milestones

Processing Step	Start	Finish
Decennial Response File 1 (DRF1)	10/29/2020	12/26/2020
Decennial Response File 2 (DRF2)	12/26/2020	2/24/2021
Census Unedited File (CUF)	2/25/2021	3/10/2021
Apportionment Preparation and Release	3/12/2021	4/26/2021
Census Edited File (CEF)	4/20/2021	6/24/2021
Disclosure Avoidance Application/Microdata Detail File	6/25/2021	7/18/2021
Tabulation File Processing	7/19/2021	8/16/2021
Redistricting Preparation and Release	8/17/2021	9/30/2021



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Questions

Backup

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Self-Response Mail Strategy

Original Plan

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>
Internet First	1	March 12, 2020	March 16, 2020	March 26, 2020	April 8, 2020	April 20, 2020
	2	March 13, 2020	March 17, 2020	March 27, 2020	April 9, 2020	April 20, 2020
	3	March 19, 2020	March 23, 2020	April 2, 2020	April 15, 2020	April 27, 2020
	4	March 20, 2020	March 24, 2020	April 3, 2020	April 16, 2020	April 27, 2020
Internet Choice	N/A	March 13, 2020	March 17, 2020	March 27, 2020	April 9, 2020	April 20, 2020

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Adjustments to Mail Strategy due to COVID-19

COVID-19 Impact on Mailing 4 and Mailing 5

Panel	Cohort	Mailing 4 ¹ Letter + Questionnaire		Mailing 5 ¹ “It’s not too late” Postcard	
		Original	Re-plan ²	Original	Re-plan ²
Internet First	1	April 8, 2020	April 14, 2020	April 20, 2020	April 27, 2020
	2	April 9, 2020	April 18, 2020	April 20, 2020	April 30, 2020
	3	April 15, 2020	April 22, 2020	April 27, 2020	May 4, 2020
	4	April 16, 2020	April 24, 2020	April 27, 2020	May 6, 2020
Internet Choice	NA	April 9, 2020	April 28, 2020	April 20, 2020	May 9, 2020

¹ Targeted only to nonresponding housing units
² Dates shown is the production end date for the cohort

Every Door Direct Mail (EDDM) Postcard to Post Office Box Only Areas

- 4.5 million Post Office Boxes in areas where the physical addresses of housing units are not eligible for any form of United States Postal Service carrier delivery service
- 1.3 million of the 4.5 million Post Office Boxes are currently assigned to customers

Self-Response Sixth Mailing Addressed Postcard

- Addressed postcard to the estimated 50 M nonresponding housing units as of mid-July; included a Census ID

Self-Response Seventh Mailing

- Additional paper questionnaire to over 16.2 million households in low-responding census tracts
- Targeted to nonresponding households that had received only one paper questionnaire in the mail

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Operational Adjustments due to COVID-19

Overview

In light of the COVID-19 outbreak, the U.S. Census Bureau had to adjust 2020 Census operations in order to:

- Protect the health and safety of the American public and Census Bureau employees.
- Implement guidance from federal, state, and local authorities regarding COVID-19.
- Ensure a complete and accurate count of all communities.

The Census Bureau monitored the rapidly changing conditions at the state and local level, and in consultation with the appropriate officials, updated the planned start dates for selected operations in selected states.

Initial Operations for Phased Restart

- Resuming Update Leave
- Resuming operations at Area Census Offices
- Resuming operations at Paper Data Capture Centers
- Resuming fingerprinting and staff onboarding for nonresponse follow-up

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Update Leave (UL)

Background: Enumerators update the address list and leave a paper questionnaire. We do this in areas where the majority of households may not receive mail at their home's physical address (like households that use PO boxes or areas recently affected by natural disasters).

Impact of COVID-19: Update Leave operations originally started on March 15. Field operations were paused on March 18 as a result of the COVID-19 outbreak. When operations were paused, work was completed on 10.8% of addresses and quality control work had not yet begun.

Phased Restart: In coordination with federal, state and local health officials, a phased restart of UL in select geographic areas began the week of May 4. Operations initially resumed in 23 ACOs across 13 states. All ACOs had resumed UL operations by the week of June 11.

Successful Completion of Operation: By the revised scheduled completion date of July 16, 99.45% of all Update Leave addresses were completed. The remaining unfinished work was located primarily in states with tribal areas that had significant closure restrictions due to COVID-19, including Montana, North Dakota, Arizona, New Mexico, Massachusetts, and Minnesota. This remaining work (0.55% of total addresses in Update Leave) was completed on August 10 just as nonresponse follow-up was beginning.

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Nonresponse Followup Soft Launch Phases

Cycle 1A – July 16

- Deployed 6 ACOs – Maine (1), West Virginia (1), Missouri (1), Louisiana (1), Oklahoma (1), Idaho (1)

Cycle 1B – July 23

- Deployed 6 ACOs – Connecticut (1), Pennsylvania (1), Virginia (1), Indiana (1), Kansas (1), Washington (1)

Cycle 2 – July 30

- Deployed 35 ACOs – Connecticut (1), Massachusetts (3), New Jersey (1), New York (1), Puerto Rico (3), Maryland (3), Ohio (1), Pennsylvania (2), Illinois (9), Indiana (2), Wisconsin (1), Colorado (3), North Dakota (1), Hawaii (1), Washington (3)

Cycle 3 – August 6

- Deployed 39 ACOs – Connecticut (1), Massachusetts (3), New Hampshire (1), New Jersey (3), New York (17), Rhode Island (1), Washington DC (1), Delaware (1), Pennsylvania (5), Virginia (3), Michigan (2), Minnesota (1)

Cycle 4 – August 9

- Deployed 162 ACOs (all remaining) – Alaska (1), Alabama (3), Arkansas (2), Arizona (6), California (30), Colorado (1), Florida (15), Georgia (8), Iowa (1), Illinois (1), Indiana (1), Kansas (1), Kentucky (2), Louisiana (3), Maryland (1), Michigan (3), Minnesota (2), Missouri (2), Mississippi (2), Montana (1), North Carolina (7), Nebraska (1), New Jersey (4), New Mexico (2), Nevada (2), New York (3), Ohio (7), Oklahoma (2), Oregon (3), Pennsylvania (1), South Carolina (3), South Dakota (1), Tennessee (4), Texas (26), Utah (2), Virginia (2), Vermont (1), Washington (1), Wisconsin (3), Wyoming (1)

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Factors that Enabled Progress

- Smooth Launch of Self-Response options - Online, by Phone, by Paper
- Phased resumption of field data collection activities
- Transitioned key training activities from classroom to virtual training, affecting training for nearly 500,000 workers
- Incorporated the use of pay flexibilities to minimize turnover of trained operational staff
- Used alternate means of data collection, including adapted processes to incorporate broader use of administrative records, such as lists of students from colleges and universities
- Repurposed original design aspects and flexibilities for additional contingency options
- Contingency funding, on various fronts, supported operational adjustments necessary to complete data collection.

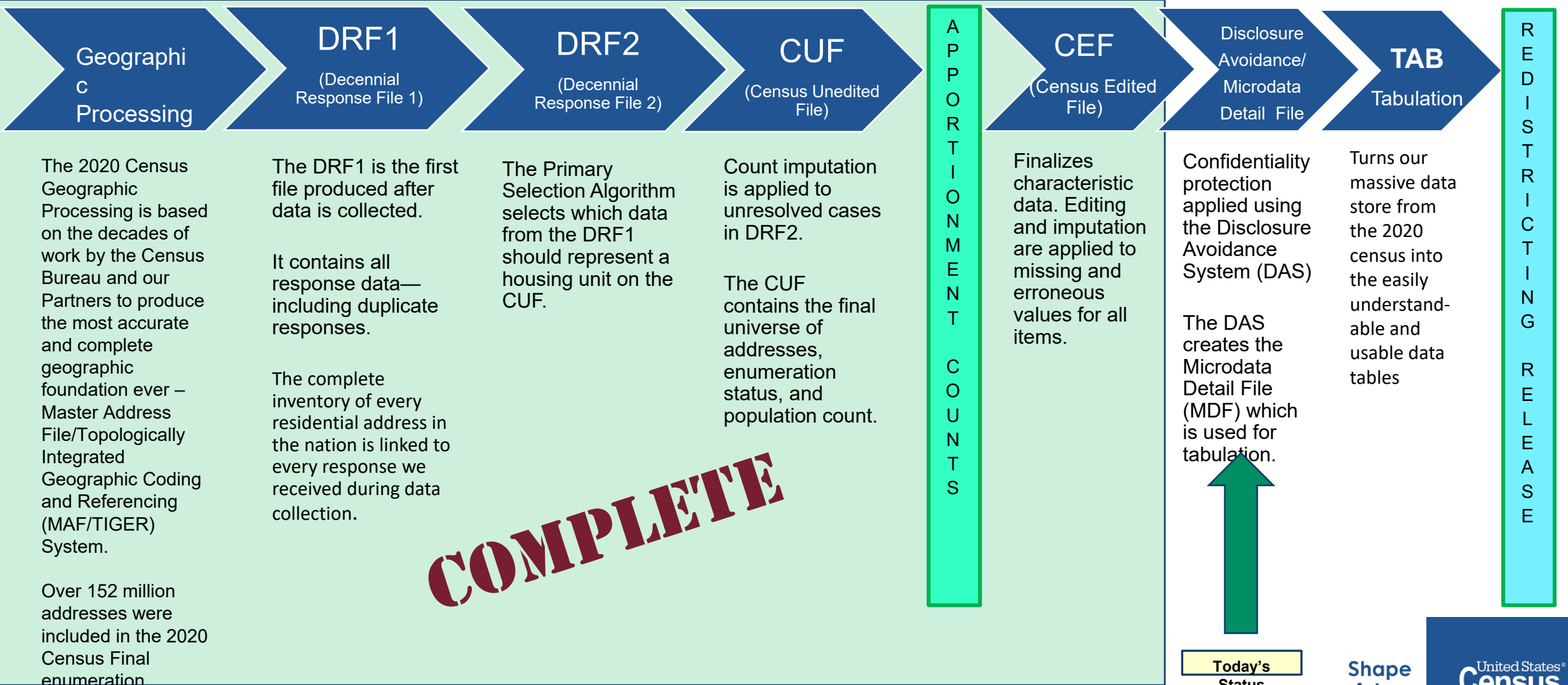
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Data Collection Successes

- **2 in 3 households responded on their own**
 - Final self-response rate of 67.0%, exceeding the final self-response rate of 66.5% for the 2010 Census.
 - 99.0M Self-Responding Housing Units (79.8% responded by internet, 18.3% by paper, 1.9% by phone)
- **Not 1 second of downtime** Internet Self-Response option successfully managed our highest traffic demand and operated throughout the census without one second of downtime.
- **Increased use of technology** Automation and increased use of technology such as enumerator use of iPhones for case routing optimization, assignment management, and data collection contributed to increased enumerator productivity.
- **Increased productivity of field staff – 1.92 cases per hour** Achieved enumerator productivity rate of 1.92 cases per hour, compared to 1.05 cases per hour for the 2010 Census.
- **99.9% resolution** In all 50 states, the District of Columbia and the Commonwealth of Puerto Rico, more than 99% of all addresses have been resolved. In all but one state that number tops 99.9%.

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Post Data Collection Processing Flow



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